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LECTURE

ON

THE OPERATIVE TREATMENT OF RETROVERSION. ALEXANDER'S OPERATION.

A Clinical Lecture delivered at St. Luke's Hospital,

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GENTLEMEN:—Until recently the treatment of retroversion of the uterus had been a standing reproach to gynecology. An inspection of older hospital reports will show plenty of cures of almost every other non-malignant ailment, but scarcely ever a cure of chronic retroversion. Retroversion pessaries of various kinds and modifications follow each other like the waves of an unquiet sea, and disappear without bringing any cure with them. Now, however, since operative gynecology has taken the subject in hand, incurable cases are fast becoming the exception.

Operative procedures are of two kinds: those for the purpose of restoring the uterus to a natural condition, and those for restoring the uterine supports to their natural functions. It is to the latter class of operations that I wish to call your attention, supposing that the uterus itself has already received appropriate treatment.

The uterine supports may be divided into three classes, the pelvic roof or sustaining, the pelvic floor or retaining, and the perineum or supplementary. The expansion and duplicature of the perineum over the pelvic organs form, with these organs and their surrounding connective tissue, the pelvic roof. When speaking of them as uterine supports, we divide them into five portions; the broad ligaments extending across the pelvis from side to side and including the uterus in their embrace; the sacro uterine ligaments, extending from the posterior surfaces of the broad ligaments and uterus near the junction of the body and cervix, around the rectum to the upper and middle sacral regions, and suspending the cervix a trifle back of the axis of the superior straight; the pubo-vesico-uterine ligament, extending from the pubes to and around the bladder and cervix, and holding the cervix away from the sacrum; and the round ligaments extending from the uterine horns or shoulders like long narrow curved arms, forward into the inguinal canals. The function of the last mentioned ligaments is to keep (or return) the fundus in front of the axis of the superior strait, so that the abdominal pressure will bear upon the posterior surface of the uterus. All of these tissues suspend the uterus in the center of the pelvis with the fundus in front of the axis of the superior straight, and the external os somewhat behind it. When the body is in a state of rest these elastic supports easily sustain the weight of the uterus, and that of the superincumbent abdominal viscera. which are also suspended and bear but slightly upon it. During muscular action, however, the abdominal pressure bears upon the posterior surface of the uterus and forces the anterior wall of the whole uterus downward toward the pelvic outlet. The resistance of the sacro-uterine ligaments tends to hold the cervix up from the coccyx and favors a rotation of the external os backward toward the sacrum as the fundus is pressed down. Thus we see that even when the uterine ligaments are not strong enough to resist this abdominal pressure they normally direct the lower end of the uterus back upon the pelvic floor and the upper end forward upon the firm pubo-vesico-uterine septum.

The pelvic floor or retaining support is made up of the lower end of the sacrum, the coccyx, and the coccygeo-anal ligament in the median line; by the ischial bones and obturator internus muscles laterally; between these points by the sacro-sciatic ligaments, pyriformis, coccygeus, levator ani and levator vagina muscles, the levator and recto-vesical fasciæ, and lower down by the connective tissue padding of the ischio-rectal fossa, the gluteal muscles. etc. These structures form a firm floor capable of supporting the uterus when borne against it by any pressure to which it is liable.

The perineum, supplementary uterine support occupies the space between the pubic rami in front of the anus and extends in the median line back along the coccygeo-anal ligament to the coccyx. It is made up of the recto-vesical fascia and levator vaginæ, or vaginal sphincter, supported by it; the perineal septum or triangular ligament containing the constrictor urethræ; the perineal fascia containing the constrictor cunni or vulval sphincter and the transversus perinei, and by the sphincter ani with its facial coverings. The perineum forms a barrier across and just below the pelvic outlet or space between the levator ani behind and the pubes in front. It is firm enough to act as a support to the viscera which penetrate it and terminate in it, and at the same time is sufficiently elastic to allow the visceral contents and fruits of parturition to pass through it. It supports

the uterus indirectly by supporting the parts in front of and below it.

In every complete retroversion of a normal sized uterus the external os lies in front and the fundus behind the axis of the superior strait; in slighter forms the displacement is the same in kind but less in degree. Hence our operations must either assist in holding the cervix back of the axis of the superior strait, or the fundus in front of it.

For holding the fundus forward two operations have been performed, viz.: (1) stitching the fundus uteri or its appendages forward against or near the abdominal walls or bladder, and (2) shortening the round ligaments. The former, first done by Kœberlé, requires that the abdominal cavity be opened, and is seldom justifiable except as secondary to a laparotomy for another purpose. We can usually employ other equally efficient and less hazardous means. The operation for shortening the round ligaments was conceived, successfully performed and established as a therapeutic measure by W. Alexander, of Liverpool, in face of almost universal opposition. The most telling objections against the operation were that it was difficult to perform (an exceedingly puerile one), and that it was unscientific to operate upon the round ligaments because the sacro-uterine ligaments were the chief ones at fault. The latter objection is rendered untenable by the fact that when we draw the fundus forward we restore the normal direction of the uterine axis with reference to abdominal pressure although the whole uterus may be a trifle forward of its natural location, and by the fact that after the os is rotated backward the sacro-uterine ligaments tend to retract, and regain their supporting function. I would like to remind you here that the traction of the shortened round ligaments are not antagonized by abdominal pressure, but turn the fundus so that abdominal pressure assists them.

This patient has a flexible uterus and a relaxed state of the sacro-uterine and broad ligaments, allowing the cervix to turn forward and upward against the vesico-vaginal septum and the fundus to become wedged in the cul-de-sac of Douglas. Failures in fitting pessaries by myself, and afterwards by another gynecologist, and a persistence of distress, inability to attend to her duties and hysterical symptoms, in spite of local and general treatment, have influenced me to perform Alexander's operation.

As you see, she is a young, well developed, somewhat muscular woman, without any superabundance of fat. The ligaments should be of good size and easily found. I begin my incision over the pubic spine and extend it for an inch and a half outward along the upper edge of Poupart's ligament. One cut brings us through the skin, another through a stratum of fat down to the deep layer of the superficial fascia. I have struck the external pudic artery on the inner side of the incision and the superficial epigastric on the other, both of which in this case are so large as to require fine catgut ligatures. Below this deep layer of the superficial fascia we seldom find blood-vessels of any size. Another cut brings us down upon the external ring which is easily felt by the finger end as a long narrow depression along the upper edge of Poupart's ligament, and near the pubic spine. With a probe-pointed fascia scissors I now cut all the tissues to the entire extent of the incision, introduce these small tracheotomy retractors, and have a clear bloodless field for work. An incision is now made from the pubic spine along the upper edge of Poupart's ligament right over the inguinal ring and as far as the depression is felt to extend. A slight bulging of fatty tissue shows that the inguinal canal is open. I seek for the ligament at the junction of the pubic spine and Poupart's ligament, and by looking carefully can see a delicate white nerve filament running over some pinkish slightly striated tissue. I cut the nerve, which is the genital branch of the genito-crural, and take up the tissue under it with the forceps, being sure to keep near to the pubic spine and Poupart's ligament. The thin fascia connecting it with the inferior external pillar is punctured by my broad hook and as the tissues are held up the fascia snipped toward the inguinal canal. The ligament is now free from the ring and can be recognized with ease for it is a large muscular one. By means of the hook I pull gently upon the ligament, separate the surrounding connective tissue, which forms a very loose sheath containing here and there aponeurotic bands that require section with the scissors. The ligament is strong, however, grows larger as it passes up the canal, and the connective tissue looser and more easily separated. Pulled again, the ligament slips gradually out of the canal, drawing an inverted portion of the peritoneal covering with it. The ligament may now be said to run. I now drop it, introduce a small clean sponge into the incision, and cut for the other. On this side I make the incision a little shorter—meet with no arteries—and succeed as easily as before in making the ligament run. While Dr. Hoag replaces the uterus with a sound, I strip the inverted peritoneal sheath back and, the uterus being replaced, I pull on both ligaments until the sound in the uterus is felt to move. While Dr. Foulks holds the left one I will take three sutures with fine silkworm-gut through each edge of the ring and the round ligament as thus pulled out, and approximate loosely both edges of the ring to the ligament. I now cut off the projecting loop of the ligament and fasten the free end to the connective tissue at its normal pubic attachment. A few drachms of 1 per cent. carbolized water, injected into the ring under the ligament cleanses the inguinal canal. A small perforated rubber drainage tube, which I also slip under the ligament well into the canal, will prevent an accumulation of the bloodly serum which is apt to be poured out freely during the first few hours. Using silk-wormgut for the external stitches, I carry the one nearest the pubic end of the incision through the round ligament. Having treated the left side similarly we sprinkle a few grains of iodoform in each wound, tie the external stitches and lay one of these pieces of lint dipped in a 10 per cent. solution of carbolized glycerine over each wound. Before removing the uterine probe I slip an Albert Smith hard rubber pessary over it and into position. As the patient will now wear it with comfort I will leave it for six or eight months, or until a permanent

readjustment of the tissues will have taken place. The nurse will put a little absorbent cotton over and around the dressing and fix it all in place by a double T bandage. She will change the dressings as often as saturated by the discharges.

The after treatment is based upon ordinary surgical principles. In from twelve to eighteen hours I shall inject some more of the carbolized water into the drainage tubes until it comes out clear. In from twenty-four to thirty hours I shall remove the tubes, wash out the drainage holes, sprinkle iodoform over all the stitches and then cover them with pads of iodoform gauze. In this way all bloody serum is removed and primary union under a dry dressing secured. External sutures are removed in 8 days.

We have here another patient in whom the operation will undoubtedly present more difficulties. She had some pelvic inflammation after the birth of her child about two and a half years ago, and, although apparently cured, has some faintly palpable peritoneal and cellular indurations and contractions about the broad ligaments. A slightly bluish hue of the cervix is one of the indications of such trouble, and is a condition that should lead us, before performing Alexander's operation, to examine the patient under ether, and determine whether the adhesions and contractions might not be such as render a complete and unhampered replacement impossible. In this case the fundus can be laid flat over the bladder, but less easily than in the other case. However, as pessaries do not hold the uterus in good position, and as there are no direct adhesions to prevent the shortened round ligaments acting, we will perform Alexander's operation as the most likely treatment to relieve her in the end. I have operated in a few such cases and have found that a readjustment and relief has finally occurred. She is a little fleshier than the first patient, but is rather deficient in muscular development, hence, I expect to find a smaller ligament and a greater abundance of connective tissue, and to have some difficulty in making the ligament run.

My incision, as you see, is only about an inch long and, not reaching the arteries on either side, scarcely bleeds at all. We are now upon the deep layer of superficial fascia, and I will illustrate a mistake often made, that prevents the ligament being found. We are told that when the inguinal ring is opened we may know it by the springing up of the fat. I now make an incision over the ring about half an inch long, and the fat between the deep layer of the superficial fascia and the abdominal muscles, bulges up as if from the ring. You may hunt about in this supposed ring for hours, as others have done, and not find any ligament. We now cut through this deeper layer of fat by a free stroke, and come upon a coarse fibred fascia that shows no trace of an inguinal ring either to the sight or touch, for the firmness of the fascia prevents us from feeling any depression over the ring, and the relaxed empty condition of the bowels takes away that soft fullness that is sometimes observed. Feeling about again I at last find a depression, and did I not know my landmarks well, I would cut down into it, and perhaps search for an hour—it is a depression filled with fat just below Poupart's ligament. We must, therefore, in this case disregard depressions and cut down upon unmistakable unvariable landmarks. I place my knife just external to the pubic spine and cut through the fascia along the upper edge of Poupart's ligament, for the ring must be here. I am through, but I see no round ligament, only fat and connective tissue. Picking away a little fat I cannot be certain what I see. If I now make the mistake of poking about in the inguinal canal, I will disorganize the tissues so that I may not be able to recognize anything.

Remembering that the ligament is attached to the anterior surface of the pubes near the spine, and also to the external ring, I carefully take up the tissues that lie against the upper edge of Poupart's ligament near the spine, perforate the thin fascia stretched between the tissue raised and the external pillar with my broad hook, and feel confident that I hold the round ligament. I dissect off the fascia underneath, pull off the connective tissue fibers at the sides and above, but still cannot recognize the ligament. The tissue remaining on my hook is somewhat ragged, seemingly too small, and, although I have separated this tissue quite deep into the ring, it will not pull out nor run. If I pull any harder it may break, in fact is already stretching. Now there are a few characteristics of the round ligament and its attachments that will enable me to determine whether to go ahead with this or to take up one of the other similar looking tissues. If this is an aponeurotic edge its separation from its surroundings must be followed by hæmorrhage—but the separation of this is almost bloodless; the aponeuroses when put upon the stretch come to a sudden stop, and, if pulled harder, break—while this gives an elastic resistance when pulled, and stretches before breaking; when an aponeurotic edge is pulled toward the inguinal canal, and from the pubes it shows its attachment to be at one of the pillars or under them — while this, when thus pulled, shows its attachment to be out upon the pubic bone near the spine. I am therefore sure that I have the ligament, although it is so small and has so spread itself before reaching the pubic bone that but little of it is left. Introducing my finger deep into the canal I boldly separate the ligament as far as the internal ring, and have the satisfaction of seeing it pull out slightly, become a little larger and easily recognizable. But I cannot bring out the peritoneal sheath as in the other case, and must separate very slowly with my finger in the canal. It now runs, as you see, but not so well as the other, and is about one-half the diameter.

The mistake that has often been made in such cases as this is that the ligament has been gradually stretched out instead of drawn out. When there is difficulty it is better to enlarge the opening of the ring, and get into the canal where the ligament grows larger instead of smaller, as it would if merely stretched. You will notice that I have the same condition of affairs on the other side. The uterus being replaced, I finally succeed in moving the uterine probe by pulling on the ligaments. The

difficulties are over, and I proceed to attach the ligaments and complete the operation as before. We will leave the pessary for eight or ten months.

A little reaction may be expected from the disturbance and stretching of peritoneal indurations and contractions, and possibly a dose of morphia be required when she recovers from the anæsthetic. The pessary is left for the purpose of keeping the cervix back of the pelvic axis until the round ligaments are healed in their new relationship, and until the sacro-uterine ligaments will have time to contract as much as may be. If, after two or three months there should be any tendency to a sagging forward of the cervix toward the relaxed pelvic outlet, we will raise the posterior vaginal wall by denuding and drawing up the tissues along the posterior sulci, somewhat after Freund's perineorrhaphy or Martin's *elytrorrhaphia duplex lateralis*. Thus the fundus will not only be held forward but the cervix upward and backward, and the retroversion be permanently cured.

EPIDEMIC TYPHO-MALARIAL FEVER.

BY FREDERICK HORNER, M.D.,
OF MARSHALL, FAUQUIER CO., VA.

Among the medical notes of the writer's grandfather, the late R. H. Little, M.D., who practiced at Hay Market, Prince William county, Virginia, was found the following letter from his preceptor, Dr. Benj. Rush:

"Sept. 5, 1804.—I have only to advise, in your present contest with a powerful and insidious epidemic, to accommodate your remedies to the state of the system. Try all modes of treatment. There is certainly a right one, and I sincerely wish you may find it. Tell your farmers who complain of the plaster-of-paris as the cause of their sickness, that the potato was banished from France by an edict of the government because a sickly season followed in a few years its cultivation in that country. The people after a while discovered their mistake, and recalled the potato from its banishment. Our city is unusually healthy, the heavy rains, by washing our streets and common sewers, have been in the hands of heaven of making it so."

Dr. Little afterward removed to the valley of the Shenandoah, near Winchester, and his notes show that he encountered again in 1827 another epidemic then termed remittent bilious fever. Entire families, including white and colored persons, and of all ages, were prostrated by the disease, which extended all along the river as far as Harper's Ferry, and to the near villages and towns. Though Dr. Little served as a surgeon in the U. S. army, strange his notes fail to record the occurrence of a previous epidemic of fever of widespread prevalence in the New England and Middle States in 1814–15, subsequent to the war with Great Britain, which the physicians considered to be a new form of disease, and named "Typhus Pneumonia." Unluckily, they failed to recognize that it was a low asthenic form of disease, with no visible signs of inflammatory action in the vital or visceral organs of the body, and in this aspect entirely differing from bilious remittent fever. The "lost art" introduced by Dr. Rush, of the *Lancet*, and claimed by him to have been so effective in the treatment of yellow fever in Philadelphia in 1799, proved to be a weapon of destruction when physicians were called to treat the fever in 1814–15, and doubtless many valuable lives were sacrificed because of the blind adherence to theory of the sangrados of that period. Dr. Gustavus B. Horner, a successful surgeon of the U. S. army, and physician of Warrenton, Virginia, was submitted to the depletory treatment, and after a third venesection, died in the vigor of manhood.

Incidental to the massing together of large bodies of soldiers during the civil war in this country, and from local and climatic causes, this fever, which was then first properly designated Typho-Malarial, again prevailed, and again occurred a repetition in 1886–87. The "Bulletin of Health" of Tennessee for the month of October, 1887, reported bilious fever to be epidemic in some localities. In Lebanon county there were 48 cases, 29 white and 19 colored. Out of this number were 6 deaths. The reports from seventeen counties of Tennessee show that typho-malarial was the most prominent prevailing disease, and that the year has been one of greater fever prevalence than common all over the country. Some of these cases of fever were of a very severe grade, and proved fatal. Some lacked the bowel complications and rose spots, and other distinctive features, yielding after three weeks to a treatment of iodine, carbolic acid and quinine. The newspapers also confirmed the statement of the general prevalence of the disease in Missouri, Ohio, Maryland and Virginia. It occurred, also, on board ship, as well as on land. The official report of Surgeon-General Grinnell, U. S. navy, for 1886, mentions that "the commanding officer of the U. S. S. Quinabaug, who had made a rapid trip from the United States to Egypt in nineteen days, arrived; a fever of a violent type set in, ending in perforation of the bowels and death. The crew of another vessel of the squadron contracted this fever in the port of Alexandria, though local causes favoring its development were supposed to exist on board. At Constantinople, after the vessel had gone into dock, a case was developed that could be traced to a local cause sufficient to generate the poison of typhoid fever." This report is quoted to show that naval surgeons admit the existence of a materies morbi and the infectio-contagious character of the disease.

A brief record of cases which occurred at Marshall, Fauquier Co., Virginia, in 1886–87 may interest the reader. Marshall has a population of about 200 inhabitants, and is located near the Blue Ridge mountains, in the midst of a section of the state famed for salubrity. The houses have been long built, some a century ago, with no cellars, timbers partially rotten, and in contact with the ground. The drinking water is obtained from wells and pumps long sunk and rarely cleaned out, the water receiving the débris from the atmosphere, the soil, and occasionally putrid animal matter. When

drought prevails in midsummer, the water is low and has a somewhat unpleasant taste of salts of magnesia, lime and iron. During the winter and spring of 1886–87 the weather was very cold, with violent storms of wind, and the summers were extremely hot, with the thermometer in the 90's for days; night and day distinct hot waves were felt.

Case 1.—S. G., a farmer, æt. 65. In the month of March, after great exposure buying cattle in Chicago, returned home and became ill with symptoms of typhoid fever. The drinking water of his family was obtained from a pump located a few feet from a stable and a heap of manure. He never rallied, and died comatose during the third week.

Case 2.—M. T., female, æt. 40, lived at Marshall House. Dwelling house and water supply unsanitary. This patient also died.

Case 3.—Three females, two adults and a child, in one house, were taken simultaneously ill with fever—type, typho-malarial—cerebral and nervous symptoms very violent. Within a few yards of the dwelling was heaped up the earth from a well which had been dug and rock quarried with large quantities of powder and dynamite, and left exposed to the excessive heat and heavy rains which fell during the month of July. All recovered. One case of acute dysentery occurred in this family afterward. During the month of May, 1887, Dr. Copeland stated to the Fellows of the N. E. Medical Society that he had had in his practice lately several anomalous cases of fever, simulating, he considered, meningitis. Shortly afterwards Dr. Cochrane, of the Plains, near Marshall, had under treatment three cases of fever in a single family, one very ill. The cellar and kitchen of the house was very unclean, and fouled by the débris of decayed vegetables and chicken offal thrown out near the dwelling. All recovered, under the treatment by baths and the internal use of antipyrin. The disease again invaded Marshall and the vicinity, and there were cases of fever in nearly every house, while the newspapers reported its prevalence all over the state.

Case 4.—M. C., female, æt. 40, occupied one of the old houses, with the flooring and timbers near the earth. She was very ill for weeks; unable to retain any food, and was nourished by enemata. Recovered.

Case 5.—P. L., male, æt. 45, kept a livery stable, and had also a distillery. At first was not seriously ill, and worried a great deal. His dwelling house was quite near the stables. When recovering he was warned to avoid exertion and exposure to the sun. He rebelled, however, and when about attending to his affairs, relapsed, became comatose, and died in this condition.

Case 6.—H. M., female, unmarried, lived in an overcrowded house, with inmates who had no special employment, and were perhaps poorly fed. Her case presented all the worst symptoms of typho-malarial fever. She recovered after a long illness.

Case 7.—M. D., a colored woman, æt. 45, was ill with the fever for several weeks in the month of October. Had for several weeks symptoms of heart disease. She made a good recovery, and afterward appeared in better health than for many years. In the month of October following, while undressing for bed, she dropped dead, from mitral disease and paralysis of the heart.

Case 8.—G. A., female, married, æt. 30, has three children and has had three miscarriages, and for several years symptoms of Albuminaria. When taken ill with fever there was great body heat, high fever, and wasting of flesh. After sponging with cold spring water, the skin would dry as if it were a heated metallic surface. The drinking water was obtained from a spring near the stable, and was considered unwholesome. At the end of five weeks she was delivered of a dead fœtus at the period of five months' gestation. Afterward she made a good recovery.

Case 9.—B. C., a married lady, æt. 50, resident of Philadelphia, before coming to a country residence near Marshall to spend the summer. She had lately moved into a house, the entire repairs of which had given her great worry; had for several years complained of constant dull pain in the right side, after exposure to malaria while visiting Europe. In midsummer she returned to the city for a few days, but again came to the country here, becoming ill with symptoms of incipient typhoid fever. She went back to the city. The report received of this case was that at the end of six weeks the patient became suddenly ill—great prostration, pallor, cold extremities, and collapse, with swelling, and all the signs of an hepatic abscess. After consultation, her physicians, Profs. Bartholow and Parvin, at first were inclined to operate, but waited, and finally left the cure to nature. After three months' severe illness, the patient is making a good recovery.

Case 10.—M. W., the son of this lady, æt. 21, a druggist by profession, became ill with fever; acute pain, tenderness of the abdomen, temperature 104°, pulse 93°, and signs of collapse and peritonitis. He had been allowed to visit his mother's chamber, after the free use of disinfectants on his face and hands. It may be added that this patient's business was in a large manufactory of drugs and chemicals, and confined him during the entire day to a heated if not impure atmosphere. For some weeks he complained of loss of appetite. Resident in the house where his mother was ill for weeks with fever, it cannot be a matter of surprise that he contracted the disease, which developed the usual symptoms, with marked fœtor. Both of these cases are now convalescent, and have been ordered to a health resort in the South.

That the brief narrative presented of these fever cases at and near Marshall suggests a clew to the etiology would appear to be self-evident. The dwellings were unsanitary, the drinking water impure, the isolation of patients was neglected, and the season was marked by excessive hot weather, with the epidemic tendency to typho-malarial disease. In Pepper's "System of Medicine," chapter "Typhoid Fever," by I. H. Hutchinson, M.D., the author mentions that a single case at Darwin, England, where the sewerage of a single house was defective the excreta of a typhoid fever patient was carelessly

thrown into a well from which drinking water was obtained, and 1,500 cases occurred in that town. In another instance it is proved that the excreta of a patient living in a town near London gave origin to an epidemic fever affecting 62 families, who used the milk of diseased cows. Indeed, the medical profession at present are agreed in the opinion that the stools and clothing of fever patients, and the putrefactive débris of wells and cellars, and impure water or milk, so long as they retain the specific germs, bacilli typhosi will prove sources of infection—the incubative period being usually three weeks. And as a final cause, it may be added that the Bible informs us that the Almighty smites man with fever as a judgment for punishment of sin.

Treatment of Typho-Malarial Fever.—Only the Divine Savior, who healeth all our diseases, has by a touch and word cured any form of fever. The office of the physician would appear to be in his treatment of a case, to seek to avert harm to important vital and excretory organs and viscera, where lesions exist. At Marshall and in the vicinity the three methods of treatment now recommended by standard authors were tried, viz.: first, baths; second, antipyrin, and third, iodine. In the treatment of the fever at Marshall, each of these methods were given a fair trial, and with excellent results. The cold bath, begun with first in the morning, and afterwards repeated three or four times during the 24 hours, acted admirably in adynymic cases attended by high nervous excitement. Antipyrin, five grains every three hours, administered internally. After a bath there is marked reduction of temperature, and of the pulse rate, and when the full effects of antipyrin was obtained, profuse perspiration, followed by refreshing sleep and a desire for food, with no unpleasant effects, as sometimes follows the use of quinine.

Professor Robert Bartholow was the first to suggest the use of iodine, which, it is supposed, produces a condition of blood in which micro-organisms, including the bacilli typhosi, cannot live. The Statistics of Collective Investigation are as yet needed to prove this theory. The distinguished author recommends the following formula:

℞	Tinct. Iodid.,	f. ʒij.
	Acid Carbolic Liq.,	f. ʒj. M.

Of this, one, two or even three drops is given in a sherry glass full of ice water, after food, and repeated every two or three hours during the day and night. In addition to this treatment, Hydrarg. Murias, gr. v, is prescribed, and repeated on alternate nights until three or four doses have been administered in the course of the first six or eight days. Unless there is a high temperature, 104° F., it is stated the fever calls for no special treatment beyond cold sponging. The single case treated after this method near Marshall recovered.

The diet of the fever patient should be strictly regulated, and such should have complete physical and mental rest, with the services of a trained nurse. He should use boiled water, cooled by ice, as the process of boiling tends to arrest fermentation, though it may not suffice to prevent the development of bacilli.

Finally, it may be added that for many years prior to the discovery of remedies already enumerated, ol. ferebinth, sulphate of quiniæ, and alcoholic stimulants were esteemed as valuable medicines for the treatment of typho-malarial fever. In the "Medical and Surgical History of the War of the Rebellion," vol. ii, it is stated by Cullen, Rush, Physic and Chapman that whenever the tongue became smooth, dry and red at the edges, and there was vomiting and diarrhœa, emulsio ol. terebinth. as a diffusible stimulant and local alterative acts well, and is an incomparable remedy in low fevers. Antiseptic virtues are attributed to this remedy by the authors cited, and by Bedford Brown, M.D., in a late article published in THE JOURNAL, July 2, 1887.

IMPLANTATION OF HUMAN TEETH; THE LIMITS OF ITS SUCCESS.

BY J. P. MILLER, M.D.,
OF BUCKHANNON, WEST VIRGINIA.

In reply to a considerable number of inquiries made in person shortly after the operation, and later by letters, but all too early to warrant me in the expression of an opinion as to the good result in my case of an implanted tooth, I take this opportunity of writing particulars rather fully, and I hope satisfactorily, for publication in THE JOURNAL, believing that this will be of interest to many more than those that have inquired.

While attending the late International Medical Congress at Washington Dr. Younger, of San Francisco, kindly and certainly skilfully did for me the operation of implantation, at the Franklin Building, in the presence of a number of dentists and the ubiquitous reporter. The latter had a position in the hard-pressing crowd before all others, and rested his manuscript upon an arm of the chair in which I was placed. The next day, September 10, the *Evening Star* devoted a column to "Dental Curiosities," from which I quote the following:

"To the person who believes that the sphere of the dentist embraces only, or principally the operation commonly known as pulling teeth, but called in dental vernacular 'extracting,' a visit to the clinical operations at the Franklin Building would have been a revelation. There, every morning throughout the week, prominent dentists have performed some of the most difficult and useful operations known to the profession. Patients were treated in a highly scientific manner—filling, building, scraping were done on all sides. This work has, perhaps, attracted more attention than that of any other Section of the Medical Congress.

"The human mouth, with its various uses and incidents, presents to a dentist a world of possibilities. Invention runs riot in cavities between roots, and through the gums. Dental science has been advanced wonderfully in the past few years by the energy of enthusiastic practitioners. Methods that

ten years ago were considered the acme of perfection are now abandoned as musty and worthless.

. . . . . .

"But there is one operation which overshadows all others in its wonderful character and its important future. This is the 'implantation' process. The history of the operation is as follows: About one hundred years ago Dr. Hunter, of Edinburgh, Scotland, had a peculiar idea, and he followed it out by extracting a live tooth from a human jaw and implanting it in the comb of a rooster. The tooth grew, much to the delight of the Scot, and, probably, to the disgust of the cock. But Dr. Hunter's difficulty now lay in the fact that he did not know *why* it grew, and consequently was unable, in his future operations, to select those peculiar conditions which were necessary for successful work. Considerable experimentation has gone on since that time with varying success, but it is only within the past two years that practical results have been obtained. Dr. W. J. Younger, of San Francisco, is the pioneer of the practical work in implantation, and has been carrying it on for about two years. His first step was to discover that which Dr. Hunter did not know, the cause of the growth of the tooth. He has found, he says, that the human tooth is provided, like a grain of wheat, with a membranous outer lining, which serves to supply the material with nutriment through absorption. This is termed the peri-cementum. A tooth may be extracted, Dr. Younger has discovered, and laid away for years, but if the membrane is not disturbed or injured it may be used with success in implanting.

"YESTERDAY'S OPERATION.

"The operation which Dr. Younger yesterday performed on Dr. J. P. Miller, of Buckhannon, W. Va., was as follows: A search was made in the morning throughout the dental establishments of the city until a suitable tooth was found, intact in its coating, perfectly sound, and of the proper size. The vacant place in Dr. Miller's gum had yawned for nearly four years, and the missing tooth was described as the right superior lateral; that is, in plainer language, one of the 'eye teeth' of the upper jaw, just to the right of the central tooth. The tooth was first prepared by removing with dental burrs all of the pulp, and replacing it with 'hill-stopping,' a preparation of gutta-percha. Then, when the tooth was ready, the gum was cut open by two upward incisions, making a 'flap.' None of the flesh was removed. The dentist then bored up into the jaw-bone of his patient, forming a cavity there, working away until the hole was exactly the size and shape of the root of the tooth. This consumed about thirty minutes. The prepared tooth was then inserted and so fitted that there was perfect contact between the bone and the root, and the line of the edges of the teeth was exact. A thread was next tied around the tooth and fastened to its two neighbors, in order to keep it from disturbance. The flesh was pressed down into place and left to grow.

"Dr. Younger stated that he had performed this operation about 200 times, and in only twenty has he failed. These failures he attributes to the absence of the 'peri-cementum.' In about two weeks the thread may be removed, and in another fortnight the tooth will be solid.

. . . . . .

"Surgeons recognize this operation as one of the most difficult and practical known to the dental profession, and it is claimed that in certain lines it is destined to revolutionize the science."

Immediately after the completion of what is described above, an impression of the back of the teeth next adjoining to and including the implanted one was taken, and a plate of vulcanized rubber made so as to fit closely all these. Holes were drilled through this plate through which silk ligatures were passed, then between and over front of teeth to protect and stay, or "splint" the newly implanted tooth. This I was told to leave in place for two weeks, and keep the gums carefully aseptic by frequently washing with a bichloride solution, 1–1,000. This solution I found too strong. After weakening to about 1–5,000 I bore it well and it did well. The first few days I washed—or rinsed—the gums by taking a mouthful of the solution and running it over the parts, including the newly made flaps and the entire extent of plate-covered gum, using several mouthfuls at a sitting. This was done three and four times a day at first, then twice a day until I removed the plate, on October 3. All this time I avoided the mastication of solids, even beef and bread, in the "implanted" side of the mouth.

About two months after the implantation A. M. Jarrett, D.D.S., of Grafton, W. Va., a skilful dentist of twenty years' active and extensive experience, who was with me at the Franklin Building the morning of the operation, and himself implants teeth, examined my tooth carefully and pronounced it a *perfect* success, explaining that I was an exceptionally good subject, and that no better result could be had. Up to that time and still later I had never felt that the tooth would do to "take a bite" with, not even of an apple.

During the holiday season I accidentally placed under the tooth a piece of cold turkey which sprung it loose, and gave me a soreness and pain in the gum for several days and the tooth feeling about as it did when it had been implanted a week, but decidedly and easily movable. At the time of this writing it is less painful, possibly more solid, than before the holiday accident.

To the inquiry, then, whether I regard implantation as a success, I must qualify my answer by the extent of the meaning of the inquirer, viz.:

1. Does it restore the symmetry of the teeth, gums and mouth? Yes; my tooth had been extracted about four years and the gum was badly shrunken. This did not begin to fill up until about two months after the implantation, since which time it has filled out almost completely, and the tooth is same in size, color and general appearance as its fellow on opposite side of the mouth.

2. Can the tooth be used in mastication? Upon food of medium hardness and when insalivated and partially masticated, yes.

3. Is the tooth as good as the original one whose place it fills? No; and it will be remembered that I had it upon good dental authority that a better result than mine was at two months after the operation cannot be had.

Buckhannon, W. Va., March 17, 1888.

THE NECESSITY FOR INSPECTION OF ANIMALS REQUIRED FOR FOOD.

Read in the Section on State Medicine, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

BY CARL H. HORSCH, M.D.,
OF DOVER, N. H.

Among the number of persons who have made efforts to prevent the eating of diseased animal food, Moses was the first well-known. The commands in the Talmud are:

"The animal shall be killed with a sharp knife and three cuts. If the knife has a jagged edge, or the animal breaks a leg when falling at the time of butchering, the meat is condemed.

"To eat no meat from a diseased animal;

"From an animal that has died suffering with tympanites;

"Animals which have jaw worm;

"Lameness from any cause;

"No meat from calves under eight days old;

"From sheep suffering with tetter;

"Diseases of the lungs, abnormal formations, more lobes on one side than the other (on the right 3, 5, 7, on the left 4, 6, 8,) adhesions, indurations, patches, water-blisters, matter in the vessels, if the lungs are flabby, dry, black, yellow, whitish, fleshy, or coagulations of dark, stringy blood are fouud in the vessels.

"No suppuration, or other diseases of the liver, spleen, or kidneys.

"No sharp things in the stomach, which perforated the lining of the walls, and have pus on them.

"Meat from healthy animals, and where the large vessels have been cut out is called *Kausher*."

Regarding eating pork and no fish without scales, this was most likely a dietetic regimen for the condition of the Israelites in tropical regions, and against prevailing diseases such as leprosy. It would be well if the rational parts of these commands were obeyed by all nations.

Dr. Most says: "Only healthy animals should be butchered and their meat used for food. The signs of health are: The animal moves around and appears lively; by applying gentle pressure on the back it does not bend the ears or tail; the eyes look clear and bright; the body is well formed and nourished; rumination of the cud is carried on well, no saliva flowing from the mouth; no blisters or pustules on the mucous membrane; breath is normal. no cough, groaning or gasping; the skin is not tightly grown to the body, is free from pustules, scurf, or scales; temperature normal; hair glossy. After skinning the animal we should find no boils, tumors, pustules nor black spots; the meat should be firm and has the characteristic fresh smell.

"Meat is not fit to eat from too old, too young, or from sick animals. Such meat is hard, tough, or soft, pale, watery or greasy, and the fat is soft, green or yellow. On opening the chest of healthy animals there is no putrid, bad-smelling exudations, no white patches or ulcers, no difference in color, and no disease in the surroundings of the lungs. In the stomach and bowels we find no red spots, soft, gray, black places, no dry, dark looking remains of food.

"The best meat comes from healthy animals of middle age. The appropriate age to fatten oxen is from 5 to 8 years old. Calves should be at least 3 or 4 weeks old, dropped the umbilical cord, and have lost the milk teeth. Veal and mutton should be kept from two to four days, beef and pork from four to eight, venison from four to ten, and fowls from two to four days. Fish should be cooked soon after they are killed.

"The meat of animals which have been driven fast before slaughtering is darker and heavier, contains more blood and decomposes sooner. The meat of animals killed by lightning is not fit for food. Some butchers inflate mutton to make it look plump, but such meat may contain the fetid breath of some person."

Dr. Most cites the following cases:

A man contracted a malignant fever and died, after salting meat from an ox which had been sick with murrain (Vieh-seuche). A family died after eating the meat of a hog which had been sick with angina (Braüne). In Marburg, Stiermark, several persons died of hydrophobia, who had been eating meat from cattle which had been bitten by a mad dog.[1]

In 1869 I was called to see a patient in Dover, N.H. The gentleman was 70 years old, a man of regular habits, and had been the most of his life healthy and strong, until March, 1869, when two of the lymphatic glands on the neck and several of the inguinal glands became enlarged. After examination and deduction of other diseases I diagnosed scrofulosis. The patient was a reliable, intelligent observer, and stated that he never before in his life had any signs of that disease and that there had been no case of scrofulosis on either his father's or mother's side. I afterwards ascertained that the butcher of whom my friend bought his meat had slaughtered and sold the meat of an ox which had a large swelling near one of his ears; the person who saw the animal called it "a wolf." This was a case in which I could find no other cause than diseased meat.

Two years ago a farmer brought a fat, good looking turkey to my house. While preparing it for cooking my wife found a very large liver, with white patches of the size of a cent throughout the tissue. On further examination I found fatty degeneration of the liver, and decided that the meat of that fowl would be better relished by the worms.

Glanders, hydrophobia, malignant pustules, splenic fever, tuberculosis, trichinæ and other diseases are dangerous and communicable from animals to man.

[1] Ausführliche Encyklopädia der gesammten Staatsarzneikunde, von George Friedrich Most. Doctor der Philosophie, Medicin, Chirurgie und Geburtshülfe, etc., etc.

The bare thought that we are liable to eat the meat of diseased animals causes the strongest aversion and there is certainly danger of contracting diseases thereby.

Dr. D. S. Salmon, Chief of the Bureau of Animal Industry, in answer to a letter from Mr. J. W. Bartlett, Dover, N. H., wrote:

WASHINGTON, D. C., Feb. 12, 1887.

In reply to your communication of the 9th inst., I would state that so far as I know there is no systematic and complete inspection of the cattle killed for beef in any State of the Union. Many states have beef inspectors, but as a rule they do not inspect all the beef, and in most cases do not see the animal before it is slaughtered, or the internal organs when they are removed. They simply look at the beef after the carcass is dressed. Such an inspection is not sufficient to discover all cases of disease for which carcasses should be condemned. . . . . .

Very respectfully,

(Signed), D. E. SALMON, Chief of Bureau.

In an interview with Dr. S. H. Durgin, of the city Board of Health, Boston, Mass., Mr. Bartlett ascertained that the city has had an inspection of cattle and meat three years. "All the cattle are inspected two or three days before the slaughtering, and the Inspector sees the animals killed. If he suspects any disease he inspects the heart, lungs, liver, etc., but does not make a general practice thereof. In case the animal shows evident signs of disease before killing, it is slaughtered in the rendering-house away from all healthy animals. All disputed cases are referred to the city Board of Health, whose decision is final.

Dr. Durgin stated that a large amount of tuberculosis in cattle, especially in cows, has been found."

In order to provide a better safeguard against the use and sale of diseased meat, every animal should be inspected by competent persons before slaughtering, and the internal organs thoroughly examined afterward.

The members of the American Medical Association, Medical Societies, National Board of Heath, American Public Health Association, State and local Boards of Health, every well meaning medical practitioner and citizen ought to see the importance of such a sanitary measure, and make an effort to impress it on the minds of their Representatives to Congress, State Legislatures, County, City and Town officers, that it is for their own safety and for that of over 51,000,000 of inhabitants, and thousands of persons travelling in this country, to pass laws and make appropriations for such protection, and to give the able members of 85,671 physicians, and of the veterinary surgeons a chance to carry out that very much needed part of State Medicine.

A CASE OF ECLAMPSIA, WITH ALBUMINURIA; TREATMENT.

BY J. H. BENNETT, M.D.,
OF WAUSEON, OHIO.

Mrs. H., æt. 35, multipara, was taken with convulsions at end of eighth month of pregnancy. At 4 o'clock in the morning of September 28 her husband was aroused from sleep by the convulsive action and labored breathing of his wife. I was called immediately and found patient in a comatose state; face and hands and, in fact, the whole body, œdematous to an uncommon extent. Being naturally plethoric, 16 ounces of blood were taken from the arm, followed by 10 grs. of calomel combined with ¼ gr. of elaterium. This procedure and treatment had a very happy effect in controlling the alarming symptoms. Elaterium was continued in ⅕-gr. doses administered every three hours, with 60 grs. of cream of tartar, until thorough watery stools were secured, which reduced the œdematous condition almost entirely.

Believing that urea decomposing in the blood causes the phenomena of eclampsia, benzoic acid was administered (after the thorough watery evacuations were brought about), in 8-gr. doses every three hours until the patient became conscious, after which the same treatment was continued, with the addition of wine of colchicum and guaiacum.

As soon as the patient was able to do so, the knee and chest position was adopted and maintained at times when her strength would allow of its use, thereby relieving in a mechanical way the pressure caused by the weight of the gravid uterus upon the renal circulation. The urine was frequently tested for albumin, and for the first few days the quantity was enormous, the test-tube showing that two-thirds to three-fourths of its contents was albuminous on reaching the boiling point.

The bowels were kept well open with occasional doses of cream of tartar and elaterium, with a view of reducing the work of the kidneys. Her diet during this time was a generous and nourishing one. Labor commenced in about thirty days from the time she was taken with convulsions, which terminated very pleasantly in every particular to both mother and child in about two hours from its beginning.

Considering the case from first to last, and especially the unfavorable circumstance of not being able to see my patient until taken with convulsions, and the happy results of treatment adopted, and finally the short and easy labor, leaving mother and child in excellent condition, impressed me as being worthy of more than ordinary consideration. The only addition to the treatment mentioned was an occasional dose of bromide of potash and hydrate of chloral to secure rest at night.

After an experience of nearly forty years in the practice of medicine, and in the successful treatment of puerperal convulsions when this method was followed; varying, of course, according to condition of patient and indications observed, leads me to firmly believe in its efficacy and importance.

There are five important indications to meet, as a general rule: *First*, to relieve the congested brain and venous system by bloodletting; *second*, to relieve the œdematous condition usually present, by administering drastic cathartics; *third*, to neutralize the carbonate of ammonia present in the blood by use of benzoic acid; *fourth*, to eliminate from the system urea, by the use of colchicum and guaiacum, thereby preventing its decomposition; *fifth*, knee and chest position, where it can be done, to relieve in a mechanical way the renal circulation.

Wauseon, Ohio.

MEDICAL PROGRESS.

BOURGET ON THE PTOMAINES.—DR. LOUIS BOURGET, in his thesis on the ptomaines (abridged in *Le Progrès*, No. 21, November 20, 1887), writes as follows:

The ptomaines, which form in great abundance during the decomposition of animal matter, belong, according to Gautier, to the series of the pyrides and hydropyrides. They represent oily, very viscid, colorless, highly alkaline liquids, and form, when saturated in equal proportion with strong acids, crystalizable, easily disintegrating salts. They possess a very penetrating odor, and readily oxidize in the air.

Parvoline, $C_9H_{13}N$,[1] is obtained from the putrefying flesh of the mackerel and the horse. It is an oily base, of amber color, and smells like hawthorne; it is but little soluble in water, but very much so in alcohol, ether and chloroform. Its boiling point is at 188° C. (370.2° F.).

Hydrocollidine, $C_8H_{13}N$, an oily liquid, produced by the putrefaction of meat.

Collidine, $C_8H_{11}N$, is one of the most abundant bases, has a strong smell of syringa, and is extracted by chloroform. According to Nencki, this base is identical with the collidine, first discovered by him. Guareschi and Mosso, following the method of Gauthier, repeatedly found a base of the formula $C_{10}H_{16}N$. Brieger asserts that ptomaines only form during the first stage of putrefaction, and that afterwards they perish. But the fact that it has been possible to extract them from a body eighteen years after death seems to invalidate this opinion. Brieger has investigated and isolated the following ptomaines.

Peptotoxine is obtained from fibrine peptonized by the gastric juice, without decomposition having taken place. It is a very permanent substance, and gives with strong reagents the same reactions as the vegetable alkaloids. It dissolves in amylic alcohol, and very readily in water, but is insoluble in ether, benzine and chloroform. Millon's reagent (nitrate of mercury) forms with this base a white precipitate which, by boiling, turns into deep red. This base is extremely poisonous.

Neuridine, $C_5H_{14}N_2$, is a diamine forming long needles like urea. Chlorohydrate of neuridine is very soluble in water, but, when pure, insoluble in absolute alcohol, ether and chloroform. It is the most frequent base in animal tissues. It is found in rotten cheese and in decomposing gelatine, which is very rich in this base. Neuridine occurs also in the fresh human brain. It is most abundant on the fifth and sixth days, and disappears after the eighth day. It forms precipitates with several strong reagents. Its picrate is almost insoluble.

Neuridine is perfectly innocuous, and is only poisonous as long as it is alloyed with impurities of putritive origin.

Neurine, $C_5H_{13}NO$. The putrefactive neurine is extracted from the lees after the elimination of the neuridine. It is excessively poisonous, and resembles muscarine in its effects. It appears in the form of very deliquescent needles, and is an oxyhydrate of trimethyl-vinyl-ammonia, a very soluble base. It is obtained by boiling cerebral matter (lecithine, protagon) with baryta-water, and derives itself from choline (bilineurine or sincoline), $C_5H_{15}NO_2$, by losing one molecule of water. The *choline* is found in the brain and in the yolk of eggs, in combination with phosphoro-glycerylic acid and can also be obtained from trimethyl-amine and from oxy-ethyl in aqueous solution. It is an oxyhydrate of trimethyl-oxyethyl-ammonia. By treating this choline with hydro-iodic acid and oxide of silver, one molecule of water is abstracted, and a neurine is produced which possesses the same properties as the neurine extracted from putrefying meat.

Animal ethylene diamine, which is extracted from decomposing codfish, is highly poisonous. There is, besides these, in the lees a substance of the same physiological properties as muscarine, and another which Brieger calls *gadamine*, but which does not seem to be toxic.

The *cadaverine*, $C_5H_{16}N_2$, appears already on the third day, rapidly increases, and abounds proportional to the duration of the putrefaction. It gives the following reactions: with iodized iodide of potassium and with bi-iodide of bismuth and potassium, a brown precipitate; with picric acid yellow needles; with ferrocyanide of potassium and perchloride of iron a blue color. It is a thick transparent fluid, which greedily absorbs the carbonic acid of the air, forming in conjunction with it crystals. It likewise forms with strong acids beautiful crystals, which are soluble in water and absolute alcohol. Its chlorohydrate is very hygroscopic.

Putrescine, $C_4H_{12}N_2$ (bimethyl of ethylene diamine), is not found in perceptible quantity before the eleventh day of putrefaction. It is a clear liquid of sperma-like odor, boils at a temperature of 135° C. (255° F.), and distils without disintegration in presence of caustic potash. It forms with acids beautiful crystalline salts, which are not affected by exposure to the air. It is very soluble in water.

Saprine, $C_6H_{16}N_2$ is a centesimal compound analogous to the former, from which it only differs by some chemical and physiological properties of its salts.

The last three compounds do not possess any appreciable toxic action.

The *mydaleine* forms as early as on the seventh day of putrefaction, but no sufficient quantities for examination of its properties can be extracted before the fourth week. The definite formula of this base has not yet been discovered, owing to the difficulty of obtaining it in pure condition. The investigation of its salts, nevertheless, shows that it is a diamine ptomaine, much resembling the preceding. Like these, it possesses a great reducing power, and gives with salts of iron and ferrocyanide of potassium an immediate and very copious precipitate of Berlin-blue color.

It produces increase of temperature and of the secretions, especially of the intestinal discharges. It dilates the pupils, respiration and circulation be-

[1] Brieger refuses to admit the correctness of Gautier's formulæ for parvoline and hydrocollidine. He even maintains that their existence is only due to the analytical method of the chemist.

come accelerated, after which, provided that the dose was not too large, the functions gradually and slowly become normal again; in the contrary case paresis of the anterior and posterior extremities (in animals) takes place. Death is ushered in by a rapid fall of the temperature, and the heart stops during diastole. An injection of 0.005 of a gram ($\frac{1}{12}$ of a grain) proves fatal to cats.

Poehl found in damaged flour, containing ergot of rye, a toxic base, to which he ascribes the convulsive and gangrenous symptoms which characterize poisoning by this fungus.

The germs of putrefaction produce, according to the medium in which they develop, different ptomaines. The bacilli which permeate horse-meat produce neurine; those in the flesh of fish, animal muscarine or ethylene diamine.

Nencki has demonstrated that the presence of free oxygen considerably assists the process of putrefaction.

The various stages of cadaveric putrefaction are marked by the formation of different basic compounds. Thus, *e. g.*, the choline disappears, to be replaced by trimethyl-amine. In one of Brieger's experiments it required seven days of putrefaction before the disappearance of the choline was completed, whilst the neuridine could be discovered until the fourteenth day, after which no trace of it was left. The formation of an extremely poisonous base is coincident with the disappearance of choline, which seems to confirm the theory that neurine is a derivative of choline.—*London Medical Recorder*, January 20, 1888.

Prognosis and Treatment of Cancer of the Larynx.—Dr. David Newman, of Glasgow, at the close of an article in which seven cases are reported, says:

Malignant disease of the larynx, if unchecked by operation, is always rapidly fatal, but the course it follows depends chiefly upon two circumstances: 1, the site of the primary growth; and 2, its histological structure. The most rapidly fatal cases are those of extrinsic soft carcinomata, the most favorable are intrinsic sarcomata, while intrinsic hard carcinomata may be said to occupy an intermediate position. The individual characters of the neoplasm must also be considered.

In extrinsic cancer the disease is incurable, the growth spreads rapidly, the lymphatic glands become involved at an early date, and the patient is liable to die either from suffocation, from asthenia, from hæmorrhage, from sudden collapse, or from pyæmia; or the fatal termination may be induced by perforation of the œsophagus, by the formation of abscesses, or by pulmonary disease. If tracheotomy has been performed at the proper time, life may be prolonged, and suffering for the time be mitigated, but more heroic surgical interference in cases of extrinsic carcinomata offers little or no hope of success. Although the prognosis is very unfavorable in all cases of cancer, it is much less so in intrinsic than in extrinsic growths. When the tumor is small in size, and none of the tissues external to the larynx have become involved, the hope of rescuing the patient from impending death is considerable. If, however, the disease has spread beyond the limits of the laryngeal cavity, or if the glands have become affected, then a tumor which at first may have been intrinsic becomes quite as hopeless, as far as operative interference is concerned, as if the growth had been extrinsic from the beginning. Total or partial laryngectomy is only to be thought of where the disease is intrinsic, and if the operation is to be performed, it should be done as soon as the diagnosis of cancer has been established. I am firmly of opinion that cancer is primarily a local disease, and so long as the system of lymphatics has not been involved in the new formation, I think it is quite possible that the patient may be rescued from death by the early performance of a radical operation.

When surgeons make up their minds to operate upon cancer of the larynx at the earliest possible stage of the disease, the statistics of laryngectomies will be greatly improved, and there will be some hope of curing the patient. But so long as members of the profession encourage the belief that cancer is a constitutional disease, their patients will seek to hide the fact of the existence of a tumor, in the fear that it may be pronounced to be "cancer." On the other hand, the fault is not always with the patient; it is not uncommon for the family medical attendant to postpone a consultation till he has satisfied himself of the nature of the disease; when this has been done the growth is often so far advanced as practically to place the patient beyond cure. I have frequently had painful experience of the evil effects of delay both in hospital and private practice, and I here desire to insist upon the importance of medical men prevailing upon patients who may suffer from intrinsic carcinoma to submit to operation as early as possible. My experience in the treatment of cancer has been almost limited to the larynx, mouth, and nose, where you see the disease at an early stage, and the diagnosis is comparatively easy. In the larynx the growth usually exists within the cavity for a considerable time before secondary manifestations show themselves. But while this is so it is no reason for delay—quite the contrary. If laryngectomies are justifiable, it is only on the belief that cancer is primarily a local disease, which may be eradicated if the operation be performed at a sufficiently early date.

Laryngectomy as an operation for cancer is still on its trial, and the question now *sub judice* is—should partial or total laryngectomy be undertaken as soon as the diagnosis has been established, or should simple tracheotomy be performed at a time when the growth has so increased as to cause dangerous dyspnœa? In order that a correct opinion may be formed it is the duty of all surgeons to fully record their experience. I have, therefore, brought these cases under your notice, and I hope at a future date to publish a few others which have occurred in private practice.

It is, I think, admitted by all that the only cases suitable for extirpation are those in which the disease is intrinsic; in other cases life may be considerably

prolonged by tracheotomy, which should be performed as low down as possible, in order that the tube may not be obstructed or displaced by the increase of the growth.

Without referring to statistics of laryngectomies in detail, I feel justified in saying that, until within the last few years, sufficient care has not been given to the selection of suitable cases for operation. The results of most recent experience tend to show that a careful selection of subjects for the operation greatly reduces the immediate mortality, and delays the extension of the disease; but while this is so, if time is lost by want of decision, recurrence must be looked for sooner or later.

Partial laryngectomy is indicated, and in late years has been performed frequently for unilateral intralaryngeal cancer. It is a less serious operation than total excision; recurrence is not more rapid or more frequent. Again, another advantage which is claimed for unilateral laryngectomy is, that the voice is almost perfectly retained without the use of a tracheal canula, and deglutition also may be completely preserved.—*Glasgow Medical Journal*, February, 1888.

IMPAIRED VISION AS AN EXCITING CAUSE OF MIGRAINE.—MR. PERCY JAKINS says:

For some time past my attention has been directed to the treatment of migraine by correcting any defect of vision which may exist by suitable lenses. Most writers on the subject advise medicinal and dieting treatment. Dr. Liveing, in his work on "Megrim and Allied Disorders," has advanced the hypothesis that "the paroxysms of migraine are due to nerve storms traversing more or less of the sensory tract from the optic thalami to the ganglia of the vagus, or else radiating in the same tract from a focus in the neighborhood of the quadrigeminal bodies."

The first case that came under my observation was in a married lady, æt. 34, who had suffered from periodical attacks of migraine every ten days for the last four years. She had taken all kinds of medicine, which gave but temporary relief. On testing her vision I found there was + 1.50 D. of hypermetropia. The patient was persuaded to wear corresponding glasses, much against her will, for a month. At the end of the time, when I again saw her, she said there had been no return of the migraine, and she "felt a different woman." I saw this patient a third time at the end of eighteen months and found that she continued free from her complaint.

The second case was that of a woman of 37 years who had suffered from attacks of migraine for the last three years, coming on every sixteen days. On examining her eyes I found hypermetropia which I was able to correct by + 1.25 D. glasses. The attacks of migraine in this case have entirely ceased.

The third case, a woman of 45 years, had been subject to attacks of migraine every fourteen days for seven or eight years, and had tried all kinds of treatment without benefit. I discovered that she was suffering from hypermetropia to the extent of + 1 D. The patient wore the proper lenses and has never been troubled with her attacks of migraine since.

The fourth case occurred in one of the nurses, æt. 36, at the Central London Throat and Ear Hospital. This woman was a martyr to migraine, having two attacks a week, which made her life a perfect misery. On examination I found hypermetropia to the extent of + 1.50 D. For the last six months, during which time she has been wearing the lenses, she has not had a single attack of her complaint.

The fifth case, a man of 42 years, has been a sufferer from migraine for the last six years. Hypermetropia was discovered which was corrected by + 2 D. Since he has been wearing these lenses the attacks have entirely ceased.

The sixth case occurred in a child of 10 years, who had complained of symptoms of migraine for the last three years. On testing his vision I discovered myopia, which was corrected by — 2.25 D. There has been no return of the attacks since he began to wear the proper glasses.

From the above cases one feels justified in concluding that in all cases of migraine the sight should be carefully tested and suitable lenses ordered. These cases have an additional value in the fact that no medicine was prescribed, and no alteration in diet ordered.—*The Practitioner*, March, 1888.

PYE-SMITH ON PROGNOSIS.[1]—DR. PYE-SMITH sums up the conclusions arrived at in his paper in the following prognostic aphorisms: Epidemic diseases are most fatal when first introduced. Acute diseases, following upon chronic, are the most dangerous. A degree of pyæmia, which is of slight importance in a child, is grave in an adult, and imminently perilous in an old man.

Typhus fever is most dangerous to persons who have passed their 60th or 50th year; less so to infants and those between 30 and 55; and least dangerous to children about 5 and to young adults.

Small-pox in these particulars closely resembles typhus. Whooping cough is dangerous during infancy, and benign after 5 years of age. Scarlet fever seldom takes on a malignant form when it attacks adults. Acute lobar pneumonia has usually a favorable issue in youth, and is usually fatal in advanced years. In young adults pneumonia is rarely fatal unless the patient has disease of the kidneys or of the heart, or is of intemperate habits. Pneumonia is also a dangerous complication of fevers or acute rheumatism. Acute lobar pneumonia, when not fatal, leaves the lung uninjured after recovery, and the patient in good health. It is seldom or never followed by phthisis even when it attacks the apex. Primary acute pleurisy is not fatal, unless it is accompanied by pericarditis. Pleurisy, if under treatment it ends in death, is secondary to tubercle or to cancer, or to disease of the kidneys. Œdema of the larynx is very seldom dangerous; œdema of the lungs is usually so. Acute bronchitis is a frequent cause of death in young children and old people. Fatal bronchitis, in persons between 10 and 60 years of age is either capillary or secondary to tubercle. Phthisis is most pernicious when it is hereditary. Consumptive patients,

[1] Observations on Prognosis. By P. H. Pye-Smith, M.D., Guy's Hospital Reports, vol. xliv., p. 59.

who lose flesh and color and appetite, with but little signs of disease in the lungs, are in a worse case than those who have marked local symptoms, but whose appetite and nutrition are good. Hæmoptysis, even when copious, is not always of ill omen.

It is rare for hæmorrhage from either the lungs or the stomach to be immediately fatal, except it proceed from aneurism. Chronic valvular disease of the heart, when it complicates phthisis, does not aggravate the latter—rather it checks its progress. Sudden death is more frequent from aortic than from mitral lesions; in regurgitant than in obstructive disease of the aortic valves, and in stenosis than in dilatation of the mitral orifice. Apoplexy, when ingravescent, is commonly fatal. In apoplectic attacks, the ultimate prognosis depends chiefly upon the degree and continuance of unconsciousness; the immediate prognosis upon the degree in which respiration is afflicted. Chronic diseases of the spinal cord are more likely to end favorably in women than in men. Chorea is only fatal when the patient cannot sleep. Malignant tumors are more rapidly fatal in the young than in the old. Cancers in the aged are exceedingly slow in their process, and may even in rare cases atrophy. Stone in the kidney may frequently be cured without operation. The opposite is true of stone in the bladder. Diabetes is rapidly fatal when it occurs in young men, more curable in middle life, and of little danger in later years. Diarrhœa is dangerous only in infants and in persons above 60 years of age.—*London Medical Recorder*, Feb. 20, 1888.

Ergot and Acetic Acid in Post-partum Hæmorrhage.—Mr. John A. Francis says: It must have occurred to everyone with a few years' experience in practical midwifery to have encountered cases of *inertia uteri* after delivery. The labor may have been normally rapid and strong, and the placenta and membranes discharged entire after the usual interval, leaving a firmly contracted uterus; but presently, notwithstanding the continued pressure of the hand, the uterus elongates and acquires a feather-bed feel, and, refusing again to contract, hæmorrhage results; or the uterus may have been inert from the first, barely effecting delivery, or requiring instrumental interference; and all this notwithstanding the previous administration of large doses of ergot. In cases where the uterus does contract firmly at first, I take it to be but a continuation of the routine of labor and the uterus finding no opposition and nothing to expel, relaxes instead of passing into a state of tonic contraction. I should like to insist on the value of a pasty, or of a hectic complexion as a warning, and that an accelerated pulse, be it strong or weak, is an almost certain forerunner of hæmorrhage.

The liquid extract of ergot is very unreliable in these cases, and I have been grievously disappointed with preparations of ergot and ammonia in several instances. I have been equally pleased at the quick action of vinegar, given after ergot has failed, especially when followed by brandy or ether. Having experimentally given a wineglassful of vinegar several times, without ergot, I have found little benefit result. Arguing by analogy, I made the following mixture: ℞ Liq. ergotæ, acid. acetic. concent. aa ℥j; æther. sulph. (s. g. .735) ℥iv. This should be put into a three-ounce bottle, well corked, and shaken thoroughly. I administer of this mixture three teaspoonfuls in a wineglassful of water, and having used it now for a considerable time I am delighted with its efficacy in causing contraction and giving a refreshing sleep after a short interval, with little or no complaint of after-pains. I combine this with the good old-fashioned pincushion pad wrapped round with a napkin. I look upon the ordinary binder, with or without the two or three napkins usually offered by the nurse when a pad is asked for, as a delusion and a snare. With the lower edge well below the hips (where it ought to be to prevent slipping up), the direct pressure on the uterus is almost *nil*, and it serves merely to hinder the pressure of the hand in manipulating the uterus.—*British Medical Journal.*

Action of Strophanthus.—Dr. A. Kazem-Bek, of Kasan, reports seven severe cases in which he used tincture of strophanthus—the tincture being made of 1 part of strophanthus seed to ten parts of alcohol—in doses of gtt. 5 every three hours, four times in the first day, and gtt. 10 three times a day after that. The cases treated were chronic myocarditis, with consecutive dilatation of the heart, and with chalky deposits in the aortic valves and walls; two cases of mitral stenosis, regurgitation, alone or complicated with parenchymatous nephritis; two cases of bronchial asthma with emphysema; aortic stenosis with regurgitation; and cardiac neurosis in a woman with hystero-epilepsy. Partial failure was met with in one case only, that of a woman, æt. 37, who had rheumatic mitral disease and chronic nephritis; and in this case it was far better than succinate of caffeine and sodium, digitalis with valerian, grindelia robusta, or convallaria, with which the case had been previously treated. In the other six cases the drug caused marked improvement, usually in a short time. The dyspnœa was arrested, the paroxysms of bronchial or cardiac asthma, and the œdema gradually disappeared, cardiac action became slower and more regular, the pulse stronger and fuller, and the daily amount of urine was markedly increased. The patients slept well when they were taking the drug, and this Kazem-Bek thinks was due partly to an improvement of the general condition, and partly also to a direct cerebral sedative action of strophanthus, since he observed that dogs became drowsy after intravenous injections of the drug (tincture). From experiments made on frogs, turtles and dogs, with a view of determining whether strophanthus acts solely on the muscular tissue or not, Kazem-Bek concludes that it acts both on the heart-muscle itself and on the cardiac ganglia and the peripheral ends of the vagi; a conclusion that is supported by the following facts: 1. Atropine causes marked acceleration of the cardiac contractions that have been previously slowed by strophanthus. 2. Strophanthus does not slow cardiac contractions when they have been accelerated by atropine. Strophanthus, he

finds, also, increases blood-pressure, but the increase seems to be independent of the cardiac contractions. At any rate the arterial tension continues to rise, but the number of beats is not affected.—*Vratch*, Nos. 40 and 41, 1887.

UNITED FRACTURE OF TOOTH-FANGS.—DR. WILLIAMSON, the President of the Odonto-Chirurgical Society of Scotland, exhibited recently an interesting case of fracture of the root of a central incisor, which bore evidence of having been united. There was a history of a blow in childhood, from which the right incisor received so much injury that its pulp died, as shown by its discolored appearance. But both teeth had done good service until the patient reached the age of 45, when the left central became so loose that it was removed with the fingers. A part of the fang, however, was left behind; but being loose, was easily extracted. On examination, it was found that the two fragments fitted accurately when placed in apposition, except when there was a little chipping at one edge. The fracture of the dentine was at a higher level than that of the cementum, so that the latter formed a sort of collar for the lower fragment. There was some thickening in parts of the cementum, and the whole of the pulp in the coronal fragment was calcified, and also the part close to the line of fracture in the other piece. Whether there was any cemental tissue coating over the fractured surfaces, as in one of Weld's cases, was uncertain, since the specimen was not subjected to microscopical examination. Hohl, Tomes, Hyrtl, and others have altogether collected only about a dozen cases of united fractures in human teeth, and several have been met with in the tusks of animals. There seems no physiological reason why these cases should be so rare for new cementum is capable of being formed at any period of life, and it is no uncommon occurrence for the pulp to resume its formative functions long after the cessation of regular calcification. Tomes points out that probably the difficulty of diagnosing fracture of the root leads to improper treatment, which does not give nature a chance. Moreover a blow sufficiently violent to cause fracture would generally injure the pulp, and bring about its destruction.—*Lancet*, Feb. 25, 1888.

TREATMENT OF ADVANCED CONDITIONS OF EQUINO-VARUS.—At the meeting of the Royal Academy of Medicine in Ireland, on January 20, 1888, MR. SWAN read a paper on the treatment of advanced conditions of equino-varus, which he maintained to be curable by proper treatment, carried out before the expiration of the first year of life, or before walking had commenced. After three or four years had elapsed a modified result might be obtained, but the treatment would be prolonged and difficult. When the patient had reached the age of 10 the tarsal bones were thickened; the large adventitious bursa was dense, and included in its base the cuboid and the tarsal end of the fifth metatarsal bones. In such a case ablation of a portion of the tarsal bones was indicated. The portion removed should consist of the anterior three-fourths of the cuboid bone, all the external cuneiform, except its posterior part, the proximal extremities of the third, fourth, and fifth metatarsal bones; and the apex of the wedge would consist of a portion of the middle cuneiform. The mobility of the foot would remain almost unimpaired; and as the metatarsal bones had their epiphyses at th distal end, it was probable the development of th foot would not be interfered with. He had pe formed this operation in thirty-four cases since 1876 —*British Medical Journal*, Feb. 11, 1888.

RESECTION OF THE RECTUM.—BARDENHEUER describes an operation for removing the rectum, leaving the sphincters untouched. The sacral ligaments and the sacrum itself are cut through, the rectum is brought into the wound by means of the index finl gers, which can readily be introduced, and its fascia connections are stripped from it in the same manner. It is cut through well above the disease limits, its anterior attachments gently separated, and it is then severed about the sphincter. The two remaining portions are carefully stitched together. The cut through the sphincter with which the operation begins is left unsewed. Bleeding is stopped by direct pressure with carbolized sponges. The operation can be performed in fifteen or, at the most, thirty minutes, and from two to four ligatures are now employed, when formerly, in similar operations, from fifty to sixty were necessary.—*Volkmann's Sammlung klinische Vorträge*, No. 298.

USES OF BORACIC ACID.—It is well known that boracic acid is practically harmless. GAUCHER has found it useful in impetigo, and the more so because it is without color or odor. The scabs should be removed by means of poultices, and a solution of boracic acid in glycerite of starch, 1 : 10, is then applied. Gaucher has cured a case of tuberculosis of the skin in the same way, and has given the acid in gr. 10 doses in pulmonary tuberculosis, with advantage. The urine eliminates the acid readily and rapidly, and, as would be supposed, boracic acid is useful internally in cystitis, especially of old men.—*L'Union Médicale*, Jan. 31, 1888.

INTESTINAL ANTISEPSIS IN TYPHOID FEVER.—PARA, in an inaugural *Thèse* asserts the necessity for the internal use of antiseptics in typhoid. The antiseptic should be soluble, and should be given in small doses. Para finds the most satisfactory substance to be a mixture of naphthol and salicylate of bismuth, aa gr. 8, in powder; half the quantity for children. This should be preceded by a calomel purge—gr. 4 to 6. The stools decrease in number under this treatment, tympanites lessens, sordes disappear, the tongue moistens, and the liver and spleen diminish. —*Rev. Gén. de Clin. et de Thérap.*, Jan. 26, 1888.

OBSTRUCTED NASAL BREATHING, says BARTH, of Berlin, may cause acute or chronic suppurative inflammation of the middle ear, and that middle ear disease cannot be successfully treated while the nasal passages are obstructed.

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, MARCH 24, 1888.

ANTISEPTIC AND ANTIPYRETIC TREATMENT OF PHTHISIS.

It is not our purpose now to go over the field of the antiseptic and antipyretic treatment of phthisis, but only to notice a paper read before the Bath and Bristol Branch of the British Medical Association, by DR. W. H. SPENCER, of Bristol, in which he gives the records of two cases of phthisis treated by antiseptics and antipyretics, which may be found in the *British Medical Journal*, of January 28, 1888. And while it may be said that two cases, however complete the records and successful the treatment, can scarcely be admitted as positive proof of the value of any particular mode of treatment, it may be said of the cases recorded by Dr. Spencer that they are valuable as showing how and what antiseptics and antipyretics may be used.

The two cases were, in brief: One case of acute pneumonia of the left lung in a girl 20 years old; the pneumonia passed rapidly into acute tubercular phthisis, which was almost completely repaired by fibroid substitution, and the bacilli, that were abundant during the acute stages, disappeared as recovery progressed; complete recovery was almost assured, when sudden profuse hæmoptysis caused death: the case was ten months in duration. The second case was one of acute double pneumonia in a young woman of 22 years, which passed into acute tubercular phthisis; there was complete recovery, which was maintained at the end of twelve months; the duration of the case was five months.

The pathological conditions and clinical features of the cases, as set forth in the clinical histories may be recapitulated thus: An acute pneumonic condition of the lower lobes of the lungs at first—both lobes in one case—with concomitant general and special symptoms, showing the disease to be acute croupous pneumonia. A transition from the pneumonic condition into an acute tubercular and phthisical condition, begining in the lower lobes. Thence, invasion of the apices, after the phthisical condition of the bases was well assured. Rapid breaking down and formation of vomicæ at both base and apex. Then, the discovery of the tubercle bacillus in the sputa confirmed the diagnosis, and indicated the general and local treatment. After this there was repair of the lung tissue by fibroid substitution. This repair proceeded simultaneously both at base and apex, and was traced by physical signs distinctly during its progress. The profuse hæmoptysis in the first case left no doubt as to the nature of the lesion, and was doubtless caused by the contraction of the lung-tissue, whose building up brought death before healing was completed.

It will be of interest to recapitulate the treatment of these cases, applying the term "local treatment" to the means adopted with the special object of influencing the local mischief of the lungs—the antiseptics. In the first case, along with other remedies, a mixture of sulphuric acid, bark, and ether was used pretty continuously throughout the case, cod-liver oil being used at intervals for short periods, as it was not well borne. Kairin and quinine were the antipyretics used, the former always reducing the temperature, and quickly, but the fall of temperature was transient, and the resulting depression marked. At intervals and for a short time quinine was used in large doses, but without any effect on the general progress of the case. Throughout the second case a mixture of sulphuric acid and quinine (4 grains), or one of tincture of perchloride of iron and quinine was used, and cod-liver oil, which was well borne, was taken for a considerable time. The antipyretics used were salicylic acid and quinine, the former with good results as regards a steady and continuous reduction of temperature, but, though combined with ether, the depressing effects were sometimes bad. The quinine given in this case was used in moderate doses, and with unqualified success.

The local treatment consisted, in the first place, of iodoform, which was given in 1-grain doses in pill form, 6 grains in 24 hours; in both cases it was given for long periods. Attempts were made to increase the dose to 2 grains, but this dose always caused pain and gastric disturbance. In the first case the

drug was taken for nine months continuously, with the exception of two weeks. The second part of the local treatment consisted in the inhalation of the vapor of the oil of eucalyptus, though this was used only in the first case, and here along with the iodoform. It was inhaled by means of a celluloid respirator inhaler, worn continuously except when taking food or sleeping. From this there was no nausea or other unpleasant effect.

The diet throughout the cases was most liberal. As soon as the patients began to feel the effects of the iodoform the appetite improved remarkably, and good food was supplied in liberal quantities, some stout being allowed with the dinner after the return of the appetite.

The conclusions drawn by Dr. Spencer as regards the special methods of the treatment by iodoform and eucalyptol are:

1. He sees no reason to doubt that, when iodoform is given in doses that the stomach will bear well, and given frequently and continuously for long periods, it is absorbed into the circulation; and in the lungs, in whatever form it be, manifests its antiseptic (or antibacillary) action and properties. The good effects of iodoform so administered, in phthisical conditions, are too unequivocal to be gainsaid, however they may be produced.

2. He sees no reason to doubt that when the vapor of eucalyptol (or other antiseptic vapor that can be tolerated equally well) is inhaled continuously and for long periods, it reaches the residual air in the lungs; and so externally, as it were, bathes the affected tissues or suppurating cavities that may be open to the ingress of the air.

3. Thus, he thinks, we may have antiseptic remedies, not antagonistic, brought up on two sides to the sites of the inflammatory lung lesion, or the sites of bacillary activity; and these antiseptics, mutually coöperative, do affect for good both the inflammatory process and the bacillary activity, and bring about repair by the mode of organization after suppuration or fibroid substitution.

4. He thinks it both desirable and correct to treat pyrexia of acute phthisical processes, whether the temperature be high or moderate, by and for itself. He thinks that quinine, used as in the second case, promises great things for the future in this respect. He thinks that no other special antipyretic than quinine should be used in phthisis; and quinine serves other purposes as well when used as an antipyretic in moderate doses. It succeeded three times in succession in the second case in controlling the pyrexia —not the temperature merely.

In the treatment of these cases it is the object to bring about healing of the damaged lung-tissue, and this by means of fibroid substitution. "In order to attain this end, we must secure the same conditions and adopt similar measures, if we can by any means compass it, to those we find successful in dealing with suppurations, ulcerations, and the like lesions, in parts exposed to view. To secure these conditions we should adopt measures for supplying adequate nutrition—that is, adequate anabolism of tissue and the storing of energy—in the body generally, and in the damaged part in particular. We should deal with pyrexia on its own account, as a general and constitutional state, apart from the local suppuration or ulceration (as by quinine). We should bring the lesion under the influence of antiseptic remedies, both by internal medication (as by iodoform), and by external applications (as by inhalations of eucalyptol); and the application and influence of the antiseptic should be complete, continuous, and prolonged.

THE BILL (H. R. 1526) TO PREVENT THE INTRODUCTION OF CONTAGIOUS AND INFECTIOUS DISEASES AND TO ESTABLISH A BUREAU OF HEALTH.

This is the title of a Bill now before the House of Representatives in Washington, and from some paragraphs in both the secular and medical press, we supposed it had been prepared for the purpose of covering the important recommendations made by the committee of the Philadelphia College of Physicians, several months since, and which we concisely stated in the leading article of this JOURNAL for February 4, 1888. Those recommendations directly and strongly urged the establishment of a uniform system of maritime quarantine and health protection for the whole country under the National Government, instead of the present separate State quarantine arrangements. Without expressing any opinion of our own, we simply placed the several propositions of the committee before the readers of THE JOURNAL, and asked for them the careful attention demanded by the interests involved.

After examining the provisions of the Bill now before Congress, however, we find that it covers none of the important recommendations of the committee to which we have referred, but simply establishes a "Bureau of Health" in the Department of the Interior in addition to the U. S. Marine Hospital Service, already in the Treasury Department, and provides for the appointment of a Commissioner of Health, some of whose most important duties are

the same as are now imposed by existing laws upon the Supervising Surgeon-General of the Marine Hospital Service; and still does not go far enough in its provisions to supersede or render unnecessary the latter Service.

The adoption of the bill now before Congress would, therefore, bring into existence under these Departments of the Government two distinct medical organizations, one called the Bureau of Health, the other the United States Marine Hospital Service, each under a chief officer appointed by the President of the United States, and both subordinate to a Department Secretary If it were desirable to convert these Departments into laboratories for the special cultivation and perpetuation of intrigues, jealousies, and divided councils, concerning all medical and health matters legitimately belonging to the General Government, no better plan could be devised than the one now before Congress. We have no special medical favorites whom we are anxious to keep in office, and no medical friends we desire to nominate for a new office; but we do think that all the medical, sanitary and quarantine interest belonging properly to the General Government, outside of the Army and Navy Departments, should be under one organization with a single intelligent and efficient head. Whether that *head* is called a Supervising Surgeon-General or a Commissioner of Health, is of no possible importance to the people whose health interests he is to promote.

SWINE PLAGUE OR HOG CHOLERA IN FRANCE.—In the "weekly abstract of sanitary reports," issued from the office of the Supervising Surgeon-General of the U. S. Marine Hospital service March 16, 1888, is an interesting report of a formidable epidemic among the swine in the vicinity of Marseilles, which on investigation appear to be identical with the disease known in this country as "hog cholera." It is estimated that more than 30,000 swine have died of the disease between June, 1887, and February 1, 1888, in the department of Marseilles. Though actively contagious, its origin can be traced to no foreign source, as there have been no importations of either swine or pork into the South of France for several years.

DIPLOMA EXTRAORDINARY.—At Albany, N. Y., a man calling himself Dr. Richard M. Dayton, was arrested on the 19th inst. on a charge of malpractice in causing the death of Mary Willett. He claimed to be a graduate of the "American Health College, Cincinnati," for teaching and practicing the "vitapathic" system, including cures for all diseases of the body and soul. The diploma sets forth that Dayton has been fully instructed and is amply qualified. It authorizes him to legally practice the system anywhere in the treatment of all physical and mental diseases and to lawfully receive compensation therefor, and "in virtue of our religious organization and second incorporation, we also constitute and ordain him minister of the gospel of life and authorize him to preach and to solemnize marriage according to law, to attend funerals, and to lawfully perform all ministerial offices; and by these presents we do fully constitute him doctor of health and minister of life, this 27th day of November, 1886."

THE PRIZES OFFERED BY THE NEW YORK MEDICO-LEGAL SOCIETY, of $100, $75, and $50, for the best, second best, and third best original essay on "any subject within the domain of medical jurisprudence," are by recent action of the Society, extended to June 1, 1888; on or before which time all essays, designed for that purpose, should be in the hands of Clark Bell, 57 Broadway, N. Y., President of the Society.

DEATH OF DR. EDWARD G. NEWHALL.—Dr. E. G. Newhall, a prominent physician of Galena, Ill., died in that city on March 20. He was born in Galena in 1844, and was graduated from the medical department of Harvard in 1869. He was Mayor of Galena for two terms, and was for many years a member of the Board of Education.

ASSOCIATION ITEMS.

PARTIAL PROGRAMME OF THE SECTION OF OBSTETRICS AND DISEASES OF WOMEN.

The following papers have been offered to the Section on Obstetrics and Diseases of Women:

The Address of the Chairman, "How Gynecology is Taught," by Ely Van de Warker, M.D., Syracuse, N. Y.

"Separation of the Symphysis Pubis in Labor and its Treatment," by R. B. Bontecou, M.D., Troy, N. Y.

"A Plea for Early Operative Interference in Cases of obscure Pelvic Pain, and recurrent attacks of Pelvic Inflammation in Women," by Rufus B. Hall, M.D., Cincinnati, O.

"Exploratory Laparotomy," by Henry O. Marcy, M.D., Boston, Mass.

Any other members desirous of contributing papers to this Section are requested to send the titles at once

to the Chairman, Ely Van de Warker, M.D., Syracuse, N. Y.

PARTIAL PROGRAMME OF THE SECTION OF STATE MEDICINE.

Any members desirous of reading papers before this Section are desired to notify its officers at once.

At the coming meeting of the American Medical Association at Cincinnati, Ohio, May 8, 9, 10 and 11, papers are expected before the Section on State Medicine, as follows:

"The Malarial Germ," by Prof. William Osler, M.D., Philadelphia, Pa.

"The Causation of the Essential Fevers," by Prof. Victor C. Vaughan, M.D., Ann Arbor, Mich.

"The Internal Origin of Fevers," by J. A. Larrabee, M.D., Louisville, Ky.

"Atmospheric Temperature and Intermittent Fever," by Henry B. Baker, M.D. Lansing, Mich.

—By J. N. McCormack, M.D., Bowling Green, Ky.

"Report of Committee on Form of Law for Regulation of Practice of Medicine," Perry H. Millard, M.D., Chairman.

If those who are to contribute papers see any error in the title as here given, they will confer a favor by notifying the Secretary of the Section, S. T. Armstrong, M.D., Marine Hospital Service, New York City, or the undersigned.

HENRY B. BAKER, M.D.,
Chairman of Section on State Medicine, American Medical Association.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, February 20, 1888.

THE PRESIDENT, W. T. BELFIELD, M.D., IN THE CHAIR.

DR. F. E. WAXHAM exhibited an

IMPROVED LARYNGEAL TUBE.

(See Department of New Instruments.)

DR. F. O. STOCKTON: It seems to me that there are two or three features in these tubes which are radically wrong. In the first place, the hinge exposes a roughened surface on the inner side of the tube which might afford a lodgment to any membrane which may be loosened and worked into the tube from below, and prevent its passing out. Not only that, but in this hinged opening there is a chance for the lodgment of septic matter, so that all tubes must be very carefully disinfected, and every one does not believe in such thorough antiseptic measures as some of us do.

Another point is the action of the epiglottis. Those who have read the abstracts of the International Medical Congress at Washington, will remember the paper by Carmalt Jones, of London, upon the action of the epiglottis in swallowing. While I do not agree entirely with Dr. Jones, of London, I believe its ordinary action is the true one. We are taught that it acts like a trap-door, that it closes over the entrance to the larynx. I do not believe it has any such action; the muscles attached to it are not sufficient to cause such an action; the base of the tongue does not expand back and downwards sufficiently to cause such action. While it may, to a limited extent, be pressed backward by the [illegible] the tongue, I believe there is another [illegible] epiglottis than guarding the entr[illegible]o the lar[illegible] from foods and liquids. We h[illegible]e ascertained this much from experiments. We have taken birds and animals and removed the epiglottis and found that liquid and food does not enter the larynx when they swallow. We have seen it in man, when from ulceration the epiglottis is destroyed, they are still able to swallow food and liquids with impunity; so it seems to me the lid on this tube is of very little benefit. It seems to me that the fault in intubation is that we do not intube deep enough, making the shoulders thinner and introducing them below the false vocal cords so that they rest upon the true vocal cords, and then the false vocal cords can close up against themselves and close the entrance to the glottis. I think the mistake in intubing is that we have let the tube rest on the false instead of the true vocal cords.

DR. E. F. INGALS: I am much interested in this device of Dr. Waxham's; it seems to me an excellent idea, and I fail to see the many objections that Dr. Stockton has mentioned. I apprehend that the amount of mucous, or false membrane, or septic material, that would catch about that little hinge would be a trifling matter considering the large amount already in the throat. It would seem from the report that this tube has acted favorably in some cases. I do not think the administration of liquids is as important as is commonly supposed. In this disease we like patients to have food, but for the four or five days that they wear this tube I believe it of little consequence whether they take either liquid or solid food; there is no danger of starvation.

In the past week I have seen a case of colitis in a child, who was sick three days without taking a particle of food, not even a drop of milk, and I never saw a patient do as well as that child did, with such a disease. I think we often make a mistake in attempting to feed our patients so much, thinking we are building them up when we are really retarding their recovery, because the foods taken are not digested.

I do not fully coincide with Dr. Stockton about the action of the epiglottis; I believe that the epiglottis has a very important function. The fact that it may be removed and a person swallow well is nothing. It certainly covers the larynx in ordinary deglutition, and I think that is its function. The elevation of the larynx and pressing backward of the tongue during deglutition is sufficient in the majority of cases to cause the epiglottis to hold accurately over the larynx, though I confess it is not always sufficient, else patients would not have the trouble they experience from partial paralysis of the de-

pressor muscles. The gentleman's remarks with reference to seating the tube low down do not seem to me borne out by the experience of those who have had the greatest experience in intubation. The danger of tubes passing into the trachea I think has been very much underestimated by the profession; it is probable that when this accident occurs we ordinarily hear nothing about it. Not long since I heard of a case which seemed authentic, at the autopsy of which the tube was found in the bronchus. I had myself an unfortunate case this winter. The tube introduced was an ordinary O'Dwyer tube with a good sized head. The child did well and seemed to have recovered, when on the fifth day I attempted to extract the tube. As I had the tube nearly out the extractor slipped; I tried repeatedly, and the extractor slipped again and again, until finally the tube slipped into the trachea, and I had to do tracheotomy to remove it. About two hours afterwards, during the absence of the attending physician, the child died. The friends insist that it died from the shock of the operation. Any one who has talked with Dr. O'Dwyer must think his experiments in this matter have been very thorough; I certainly am willing to accept his conclusions as to the tube and the mode of using it.

DR. MOREAU R. BROWN: I think the tube shows a great deal of ingenuity on the part of Dr. Waxham, and looks like something in the right direction. The tubes generally used are by no means perfect, and we are anxious for an improvement. This appears to be a great advancement on what we have already seen, and I shall look with interest for further reports from its use. I agree with Dr. Ingals in his statement that the valve is not apt to catch much septic material, as it is very smooth in all its parts, and so well made there is not much chance for anything to lodge on it.

DR. WAXHAM, in closing the discussion, said: The first speaker raised an objection to the tubes on account of the danger from septic poisoning from collection of septic matter around the spring. It is always my custom, after using a tube, to soak it in 95 per cent. carbolic acid, and I am quite positive there would be no danger from sepsis after such a treatment. I think there is no danger from accumulation of mucous about the hinge.

In regard to deep tubing: I have passed through that experience, and I can see no advantage in that method over the high tubage. Indeed, during the early history of intubation, for a long time I used tubes with the small heads, so small they would rest below the false vocal cords on the true vocal cords, and yet there was the same difficulty in swallowing liquids. Dr. O'Dwyer's experience has been the same; he claims that a child will swallow food better with the larger heads than with the smaller ones first used.

These instruments were made for me by Mr. Truax, and I think the instruments should be made only by the most reliable firms, and should be thoroughly inspected by an expert before they are sent out. I am about to suggest a further change: This wire is twisted about a pivot which controls the epiglottis. I shall suggest that an opening be drilled through the pivot and a wire passed through it instead o around it, and I think there will be still less risk of impairment of the spring. This, together with the gold spring, I think will overcome all difficulties.

DR. STOCKTON: I think Dr. Ingals misunderstood me in regard to the head of this tube. I did not mean a smaller head, but thin from above downward, not laterally small.

DISCUSSION ON DR. INGALS' EXHIBITION OF INHALERS, ALREADY PUBLISHED IN THE JOURNAL.

(See JOURNAL of Feb. 18, p. 213.)

DR. MOREAU R. BROWN: The tubes are very satisfactory; I have a set of them in use at my office. The Davidson No. 25 I have previously used for general work and found it to be a better spray than we had before the introduction of these by Dr. Ingals. The objection to most atomizing tubes is the air pressure required to create a spray is so great that, when thrown into the nose, the force will undoubtedly prove a source of irritation and cause a swelling of the turbinated bodies. With the exception of their use in atrophic catarrh, I have entirely abandoned the Sass tubes and substituted the Davidson, and find the spray made by the latter desirable in almost all the forms of nasal catarrh, superior to cotton or the brush. This spray is thrown in with little force, lightly deposited upon the mucous membrane without creating irritation.

DR. C. S. BACON exhibited a patient with

SARCOMA OF THE NOSE.

The patient I have to show to-night is 21 years of age. His family history is good; none of his relatives have had tumors of any kind. Some time in December, two years ago, he noticed a swelling in the right nostril. About a week after he first noticed the tumor in the nose he went to Dr. Gunn at the Presbyterian Hospital, and the tumor was removed. Shortly after the tumor was removed the nose was swollen on the outside; nothing further was done, however, until the following August (1886); at that time the tumor had grown to about the size of a half walnut and caused some discomfort. He again went to Dr. Gunn at the Presbyterian Hospital and the tumor was removed by cutting through from the outside. No microscopic examination was made of either of these growths. The recurrence of the growth was gradual afterwards, and nothing further was done until the spring of 1887. About April, 1887, the patient went to Dr. Fenger at the Emergency Hospital. At that time the tumor was considerably larger than it was at the time of its last removal. By the kindness of Dr. Fenger I am able to show you photographs of the patient as he appeared when he was under Dr. Fenger's care. The tumor was removed by Dr. Fenger four or five times. The recurrence was very rapid; in about two weeks it reached its original size. At that time there was some talk about a radical operation, removing a large part of the upper jaw, but it was not done. After the fourth or fifth removal the patient passed from the hands of Dr. Fenger and another surgeon, Dr. Owens, was called in. He made a diagnosis of ma-

lignant tumor and said he did not think the patient's life would be materially prolonged by an operation. Three or four weeks after the last removal of the tumor, in the latter part of July, the patient came under the care of Dr. Baxter at the Alexian Brothers' Hospital. At that time the tumor was much larger than is shown by the photographs; it covered a large part of the right side of the face, extending from above the eyebrow to below the mouth, closing the right eye and extending to the left, partially closing the left eye. It was an angry-looking mass. There had been some bleeding, which had been checked by a styptic solution. The growth had not been cleansed on account of the bleeding, and it was very foul. The patient had some fever and was in quite a serious condition on account of blood and septic infection. The tumor was removed, causing considerable bleeding; the active cautery was applied, and also a styptic solution. One week later the growth had returned. This time the patient was chloroformed and the right common carotid artery tied, and the growth again removed. The bleeding from the tumor was considerable; it was partly on that account, but mainly on account of the hope of influencing the growth, that the artery was tied. The benefit of the ligation was apparent; the recurrence was not as rapid as before. However, there was a recurrence; it began to grow shortly after the ligation of the artery, but not as rapidly, and from that time the tumor was removed four times at intervals of three or four weeks. The growth reached perhaps the size shown in the photographs in the course of four weeks, not being nearly as rapid in recurrence as before the ligation of the carotid. The last removal was in the latter part of October, and from that time to this there has been no recurrence of the tumor. Two or three weeks after the last operation the surface had granulated over, and for the last ten or twelve weeks there has been no change in the appearance. The last operation was like the others with the exception that the cautery was not applied; it was simply that of gouging out the tumor; it was necessary to remove it as rapidly as possible on account of the bleeding. In the course of the operation a part of the septum was removed, almost all of the middle turbinated bone and a part of the superior turbinated bone. I am sorry that I cannot present a section of the tumor, but none were saved because the diagnosis seemed plain enough, and it was hardly expected the patient would recover. It was certainly an unpromising case. The diagnosis of sarcoma was the same as made at the Emergency Hospital. The case seemed worthy of presenting on account of the fact that it has now gone about four months without any recurrence. We all know how hopeless sarcomata of the nose are generally considered, especially cases like this, where the growth recurs so rapidly. The patient is here, and all who wish will have an opportunity of looking at the face as it now appears. I shall be interested in hearing the opinion of any who have had experience on the subject as to the probable effect of ligation of the artery in diminishing the rapidity of the growth.

DR. MOREAU R. BROWN: A case was brought to the Policlinic Hospital five or six weeks ago by Dr. Hoechsler and referred to me for operation. The history was that the man had had removed at various times, from the right nasal cavity, some six or eight polypi which presented the appearance of the ordinary gelatinous polyp or myoma of the nose. Within the next three or four days after the last operation for the removal of these polypi, which was last summer, the right nostril became suddenly occluded and remained so up to the time of the operation presently to be described. I was unable to learn the cause of this sudden occlusion; but during the fall, about November, the patient went East, and while there consulted a physician who discovered and attempted to remove a growth which filled the right nasal cavity, but as the hæmorrhage produced was so severe he gave up the operation. The man came back to Chicago with the blood oozing from the tumor. Next, three or four unsuccessful attempts were made, which produced further hæmorrhage, to remove the tumor by the snare. When the man was presented at the Policlinic it was marked that he was about 45 years of age and of a healthy appearance. On looking into the right nostril there was seen a somewhat pale tumor blocking up the cavity; the surface was irregular and bled very readily on being touched. It was only the surface which was exposed to view that afterwards proved to be irregular, and which irregularity I attributed due to the operations which had been attempted.

Dr. Miller passed his finger between the tumor and the roof of the nostril inside, and broke up a small attachment to the middle turbinated body; the main attachment being to the septum and floor of the nose. I was then able to and passed a platinum wire around the growth and removed it by the galvano-cautery. After removing the tumor from the nose there was no further hæmorrhage. The tumor was about the size of a hen's egg, exceedingly soft, of a dark purple color, smooth on the surface and of loose texture, the lower part or base being harder and more dense and firm in texture. I could find no other growths in the man's nose, either polypoid or sarcomatous; the cavity seemed perfectly clear and the man was able to breathe through it with ease. Some three or four days after I did a second operation, removing the anterior extremity of the middle turbinated body, which had been the superior attachment of the tumor. The lower attachment, or the base of the tumor, I should imagine was about 1 inch in length from front to rear, and the same measurement across the septum and the floor of the nose. This I removed as thoroughly as possible, destroying all the tissues down to the bone and cartilage with the galvano-cautery knife. The tumor was afterwards examined with the microscope by Dr. Harris and our President, Dr. Belfield, who pronounced it a sarcoma. I have reason to think there has not been any return or indication of it. It is known that these sarcomata, when removed repeatedly, will sometimes cease to return, although at first they may have shown great malignancy. Why this is so is impossible to say.

DR. E. F. INGALS: I have seen several cases similar to this, though with one exception not so bad;

perhaps three or four, in which I have found within the nasal cavity what seemed to me at first simply a fibrous tumor, but upon microscopic examination the sarcomatous appearance was so marked that the microscopist gave me a very unfavorable prognosis. One of the cases I did nothing whatever with, as it had gone too far. It was very malignant and the patient only lived a few months; but in two other cases I have removed the growth repeatedly, perhaps five or six times, and eventually the patients disappeared. Whether the growths returned or not I do not know. I heard from one of the young men a week or two ago and he had gone six or eight months without a recurrence. The other had gone three or four months without recurrence when I last heard of him. In one case, after repeated removals, the growth took on rapid growth which speedily caused the patient's death.

BALTIMORE ACADEMY OF MEDICINE.

Stated Meeting, February 21, 1888.

DR. JAMES CAREY THOMAS IN THE CHAIR.

DR. THOMAS F. MURDOCH reported a case of

DOUBLE ANEURISM OF THE ASCENDING AORTA.

On February 13, at 8 P.M., he was summoned to see Mr. B., and found him complaining of nausea, great pain in the epigastric region, very sensitive to pressure, eructating great quantities of wind and his heart beating tumultuously, so that it was impossible to hear the sounds of the heart to determine if there was any disease of the valves. The patient informed him that he had dinner at 3 o'clock at a restaurant, consisting of a beefsteak and a potato, and shortly afterwards was seized with nausea, pain in the stomach, and tumultuous action of his heart, which obliged him to go home, but did not send for Dr. Murdoch until the hour above named. He prescribed an antispasmodic mixture, and after taking two doses, he left the patient somewhat relieved and ordered a dose of castor oil to be taken in the morning. Would have given him an emetic, but he informed Dr. Murdoch that he was never able to vomit. Called at 1 A.M., the 14th, still suffering, ordered an enema, and at his own suggestion gave him half a tumbler of hunyadi water. The enema brought away some hardened fœces, and, at the same time, he *did* vomit some fluid, but nothing that he had eaten. He expressed himself as feeling much better than he had done since he was first taken. Remained with him until 4 A.M., and left him comfortable, although his heart was acting tumultuously.

Called again at 7.30 A.M. Prescribed

℞ Tr. digitalis..... ℥j
Morphia sulph..... gr. j
Aqua camphora..... ℥ ij
Sig. Teaspoonful every two hours.

Of this he took one dose.

Dr. Salzer met Dr. Murdoch in consultation at 9 A.M. Dr. Salzer had attended Mr. B. last summer at Bedford Springs. He agreed with Dr. Murdoch that the action of his heart was sympathetic, and informed him that he had frequently examined his heart, and also his urine, and he was *certain* there was no disease of either heart or kidneys. Had treated him for gastric trouble. After much consideration they determined to give him 20 grs. of ipeca in compressed pills; *this* instead of vomiting him, had the most soothing effect, and he got some sleep, the first he had had. After fifteen minutes, repeated the ipecac and he slept for nearly two hour waking occasionally. Dr. S. left at 11.30, conside ing him much better. Dr. Murdoch remained unt 12.30, thinking he could leave him for an hour or so, but had not been away more than thirty minutes when the patient expired suddenly.

Report of autopsy made on the body of Mr. B. by Dr. W. T. Councilman.

February 15, 10 A.M., twenty hours after death. Body of medium size, slightly built. Rigor mortis well marked. On the right upper arm, about one and one-half inches below the head of the humerus was depressed stellate cicatrix, and on the anterior aspect of the body between the cartilages of the second and third ribs and one-half inch to the right of the sternum was a similar cicatrix. Left lung free from adhesions. Its tissue œdematous. The right lung firmly united to the chest-wall by old adhesions. Its tissue œdematous. In the left pleural cavity about one ounce of clear serum. The entire heart was enlarged, both ventricles, especially the left, somewhat dilated. The wall of left ventricle slightly thickened. The muscular tissue of heart flabby. All the valves of the heart were normal. The aorta atheromatous in its entire extent. In the aorta just above the aortic valves were two aneurisms, one opening in the sinus of Valsalva behind the right anterior valve, and one behind the posterior valve. The one to the right was the size of a black walnut, its opening into the aorta about three-fourths of an inch in diameter. The aneurism opening behind the posterior valve was not larger than a small hazelnut. In the wall of the right auricle there was an area about one inch in diameter where the wall was thin, anæmic, and in the middle of this a ragged opening the size of a No. 14 catheter which passed directly into the larger aneurism. Both aneurisms contained red coagula. Liver, kidneys and spleen congested. In the abdominal cavity about 3 per cent. of clear serum.

DR. T. A. ASHBY said, that through the courtesy of the attending physicians, he had witnessed the autopsy in the case reported by Dr. Murdoch. He had known this gentleman for a number of years, and was as much surprised as were his medical attendants at his sudden death. He had never attended the gentleman professionally, and therefore, had never examined his heart, but was aware of the fact that he was a frequent sufferer from attacks of indigestion which gave him much uneasiness and distress. At times he complained to his family of thoracic pains and of dyspnœa after exercise. He also complained of palpitation and of frequent action of the heart. The valves of the heart were

normal, and there were no physical signs present pointing to cardiac trouble. His medical attendants were therefore correct in assuming that illness was not referable to circulatory changes. The cause of sudden death was explained by the rupture of the aneurismal sac. In his judgment the disturbance of the circulation was primarily induced by the retching and vomiting, which induced sufficient pressure upon the alrady weakened aortic sac as to occasion rupture and sudden death. It is probable that rupture was in this wise hastened, but it would in all probability have occurred at an early date from mere attenuation, or physical exercise, had not the attack of indigestion occurred. Changes in the aorta had evidently been going on for some time, though no means of determining this fact were presented to his medical attendants. In the light of present circumstances. it was easy enough to construct a theory and establish a chain of evidence which would explain a result, but in dealing with conditions we were guided by facts in view and not by suppositions which only became clear after they are obtained from positive information. It was easy enough now to account for the presence of a condition since it had been discovered by post-mortem evidence, but this information was not possible before death. The treatment of the case was rational and not open to criticism. Who could have done better? This is a practical question to which each one must give a candid answer.

DR. JAMES CAREY THOMAS asked if atheroma could be diagnosticated when not far advanced. He also spoke of venous engorgement which occurred in such cases.

DR. JOHN R. UHLER thought that if the physics of auscultation were better understood and more thoroughly studied, we might be better able to understand obscure cases. He referred to a similar case in his own practice. He was called to see a man one morning at nine, and found him with a pain in the chest, and unable to lie down. The patient died at 9 P.M. the same day with a sharp pain at the centre of the sternum. A diagnosis during life had not been made. The autopsy showed an aneurism which had burst in the mediastinum. The aneurism had probably been open for twelve hours, and the blood was leaking out all that time.

DR. F. T. MILES said, the history of this case helped to show that it was not necessary for the chambers of the heart to empty themselves to carry on its function. The right auricle in this case was probably always distended with blood. He recalled the case of a man who had attacks of spasm of the glottis, and whose circulation and breathing were impeded. No one had made a diagnosis. The autopsy showed an aneurism pressing on the trachea, and probably carrying on its effects through the recurrent laryngeal nerve. It was not easy to see why such attacks were paroxysmal, and not continuous. He thought that when an aneurism once burst, nothing could be more sudden than death.

DR. WILLIAM B. CANFIELD said he thought many cases were on record in which the patient had lived for twenty-four or forty-eight hours, or even longer after the aneurism had broken. He had reported a case last year in which the symptoms, produced by pressure on the pneumogastric and recurrent laryngeal nerves were well marked. In this case there was hoarseness and stridulous breathing, and the pupil was also affected. The case had improved under the use of the iodides, the worst symptoms disappearing, but the patient passed out of his sight, and the diagnosis had never been confirmed by an autopsy. Several other physicians had also seen the case, and had pronounced it an aneurism of the aorta. The iodides, and particularly the iodide of sodium, had been much used of late in these cases. He had under observation at present a man who suffered with violent palpitation, cough, contraction of the left pupil, and he suspected an aneurism, but none could be found. The man had worked in lead, and had had lead colic. The iodides had done him good.

DR. F. T. MILES reported a case of

LABYRINTHINE VERTIGO

in a boy 16 years old, who had attacks like epilepsy. He would suddenly fall down and get up again, and when asked would say nothing was the matter. His eyes would roll. The important point was the loss of consciousness. The boy said he did not lose consciousness, and his friends said he did. It was difficult to say whether he did or not. Patients with *petit mal* often lose their consciousness without knowing it. This patient had fallen at times. He could walk a straigt line without hesitation or deviation, but when he stood with closed eyes he went over to the left side. It was not locomotor ataxia; he could get no knee jerk out of him. He thought it was a case of labyrinthine vertigo. He had had otorrhœa and loss of the drum membrane. This case was as interesting as some of Mr. Gowers. He laid much stress on the way in which he fell to the left. He thought tinnitus aurium was not sufficient to cause it. It was much like epilepsy.

DR. WILLIAM B. CANFIELD, in referring to this vertigo and falling to the left with closed eyes, asked Dr. Miles if a perfectly healthy individual, with one ear artificially stopped, would be apt to fall over on closing the eyes. The sense of hearing has much to do with preserving the equilibrium in total darkness, as any one might notice. It would be interesting to know if one totally deaf suffered any less from sea-sickness than others.

IDIOSYNCRASY TO IRON.

DR. THOS. E. MURDOCH, in treating a child with double lobular pneumonia, had used beef, wine and iron, and noticed that the child put its hand to its head, and on stopping this preparation the child grew better. He thought it was not the alcohol, as he had continued that. He attributed it to the iron, as the grandmother had always been unable to take iron. It was a remarkable case of heredity.

THE VOLCANIC ORIGIN OF EPIDEMICS is the title of a new book, by Dr. John Parkin, recently issued in London.

GYNECOLOGICAL SOCIETY OF CHICAGO.

Regular Meeting, Friday, December 16, 1887.

THE PRESIDENT, HENRY T. BYFORD, M.D., IN THE CHAIR.

THE PRESIDENT exhibited

A NEW UTERINE ELEVATOR,

and said: I have been in the habit, for a long time, of introducing an ordinary straight, hard rubber-intrauterine stem into the retroflexed uterus before replacing it, in order to stiffen or straighten it, and to serve as an indicator of the position of the fundus after it has ascended out of reach. Last summer a cutler showed me a uterine elevator, invented by Dr. Miller, of San Francisco, which consisted of a straight steel stem, fastened upon the end of a thimble, with the end in view of making the stem a continuation of the finger end. I was unable to use this one, because in bending my finger so as to push the cervix back in place my knuckle would catch against the posterior vaginal wall or pelvic floor. I therefore constructed this instrument. There are three stems: a jointed steel stem, like that upon the end of Emmet's elevator, and two copper ones of different sizes, slightly flexible. Any of these may be attached to a shovel-shaped piece in which the finger end lies at right angles to the stem. The cervix may thus be pushed backward or sideways, and the fundus pried forward. With the finger thus against the end of the stem, and practically against the cervix, we can calculate the position of the fundus, the amount of resistance to replacement, and avoid all violence and danger.

The Secretary read for Dr. F. W. Mercer, Chicago, a

REPORT OF A CASE OF TUMOR OF THE ILEUM; DEATH FROM INTESTINAL HÆMORRHAGE; EXTENSIVE COMPLICATING LESIONS.

The following history was communicated to me by Dr. Converse, the attending physician:

Annie W., single, æt. 34 years, was always considered in good health. Had menstruated regularly without undue pain till within the past year, when it was observed that the flow was not quite as copious as in health. All the other bodily functions had been regularly performed so far as the friends knew. Miss W. was of cheerful disposition, vivacious, and physically strong, being able to toss her sister's child, weighing about twenty pounds, up at arms length above her head.

About one year ago, she consulted a leading physician of this city to whom she complained of a throbbing sensation in the left inguinal region, and also of some slight digestive disorder. The doctor informed her that he considered the throbbing due to the presence of gas in the intestine, and prescribed some digestive. After this, the patient went along as usual, not making any special complaint, till the morning of October 16, 1887, when she said she felt tired, reclining upon the bed in her room. About 11 A.M. she had a movement of the bowels, consisting almost entirely of blood, but not large in amount. Dr. C., who examined the stool, concluded it was due to "bleeding piles." Absolute rest was ordered. At 12.30 P.M., the patient left her bed and entered the bath-room, where she fainted while passing another bloody stool. She was carried back to bed, where she soon revived. Dr. C. saw her again, and ordered pyrogallic acid and ergot, with brandy at short intervals. From this time till 9 P.M., she grew very restless, having involuntary discharges of blood which were received upon cloths, making any accurate estimate of quantity impossible. At about the last named hour, I was called in consultation, and found the patient tossing from side to side of the bed, groaning, and complaining of pain in the umbilicus. The features looked shrunken and pinched, the surface blanched and clammy, the face very cold to the touch, and the pulse barely perceptible. In fact, the patient appeared moribund from hæmorrhage.

An examination of the abdomen was made, and the presence of a tumor, quite symmetrical, of globular form, was discovered in the median line, just above the pubes; an enlarged uterus was suspected as the source of the hæmorrhage, and an examination *per vaginam* was made, with the result that the os was found to be of pin-point character, cervix elongated, and giving no indications of hæmorrhage.

Hot-water bags and bottles were applied to the surface, warm blankets packed about the body, and brandy given subcutaneously with aromatic spirits of ammonium by the mouth. Transfusion was thought of, but, the means not being at hand, it was not tried. Dr. E. W. Sawyer was called, but little could be done, as the patient was now *in articulo mortis*.

Section, fourteen hours after death; Dr. E. D. Converse, Dr. E. W. Sawyer, Dr. W. Barry, Dr. Frank Andrews, and your reporter being present. The section was made by Dr. Frank Andrews. The body appeared well nourished; the rigor well marked. Upon reflecting the abdominal parietes, the intestines appeared rather pale, and not unduly distended. At the lower hypogastrium a tumor was found resting in the median line. It was globular, ten centimetres in diameter, and weighed 454 grams; was moderately firm in consistence, and attached by a slender pedicle to the small intestine (ileum), about fifteen inches above the cæcum. Upon section of the ileum, an oval opening was discovered upon its mucous surface, about four millimetres by three millimetres. This opening corresponded to the attached pedicle, and communicated directly with an artery of about four millimetre calibre. It was undoubtedly from this that the fatal hæmorrhage occurred. There were old and extensive adhesions of the intestines to the peritoneum. Both the right and left kidney showed a greatly reduced cortex; and the tubuli and pelves were found filled with pus. The liver was very fatty and friable, breaking under pressure like old granular tallow. The uterus was converted into an irregular lobulated mass, consisting of fibroid tumors. The thorax was not opened.

DR. F. W. MERCER: I very much regret that I

have not the stained specimens to show you to-night. I have, however, examined the tissues, and the tumors of the uterus are intramural myomata. The tumor of the intestine is also a myoma. It is a very vascular structure. I have been unable to develop the literature on this subject; few, if any, such cases have been reported, and I have not been able to find a parallel case to the intestinal tumor, as regards the peculiarity of its attachment and the openness of the blood-vessels. Myomata are often very vascular.

DR. E. W. SAWYER: As a still further emphasis of the condition of this patient, I want to say that she filled a difficult clerical position, involving a good deal of labor, up to the day previous to her death. I have seen her in life for the last ten years, and knew her to be industrious and a healthy appearing woman.

DR. C. T. PARKES: It might be proper to suggest the idea that this was an angioma. The partial description that has been given would call my attention to growths of that character; its extreme vascularity; the size of the vessels entering into it; its position, differing in this respect from myoma. The tissue about the walls might be connective tissue, showing some evidence of muscular fibre. I speak merely from my experience. I have seen quite a number of myomata, but never saw any that showed the pecularities of this specimen. It might have developed, as suggested by Dr. Dudley, in some other place, this being a foreign position. As to its attachment, I think it would be in reason to say that it might show muscular fibre, if it was an outgrowth from the intestine. I would not say, of course, that it is not a myoma.

DR. A. REEVES JACKSON: It seems remarkable that this should be a myomatous tumor when so little muscular structure can be found as a basis in the intestine. The case, too, is interesting and remarkable in its history, from which we learn that the woman had degeneration of long standing of a portion of the liver; that there were adhesions of the intestines to the abdominal wall, indicating the former existence of peritonitis; that there was a fibroma of the uterus; and yet, despite all these diseases, the patient was in good health up to a recent date. All this is very remarkable. I know that women can live and seem fairly healthy with a good deal of disease present, but such an amount as was present in this instance seems quite inconsistent with a condition of *good* health. It is exceedingly important that this specimen should be examined microscopically, because its nature must be of very great interest to the pathologist.

DR. E. C. DUDLEY reported a case of

VAGINAL HYSTERECTOMY FOR SARCOMA UTERI.

The patient, a multipara, 62 years of age, came to me from Dr. Sibree, of Sturgeon Bay, Wis. Dr. Sibree, several months before, had removed a soft, friable mass, filling the uterus and vagina. When the case came to my clinic at St. Luke's hospital, two months ago, the tumor, which had returned, enormously distended the uterus and vagina. Under ether, the operation previously performed by Dr. Sibree was repeated, and a soft, friable mass, weighing not less than two pounds, was removed. The tumor was attached by a short pedicle, about three-fourths of an inch in diameter, to the left side of the uterus, about on a level with the os internum. The specimen was examined by Dr. Wing, who pronounced it to be a sarcoma; I therefore determined to remove the uterus *per vaginam*, which was done three weeks ago to-day.

The case is remarkable and interesting. Remarkable because sarcoma of the uterus is a somewhat rare disease, the number of cases on record being less than one hundred. Interesting because a method of operation was employed which has heretofore not been very much used—the method of Péan, *i.e.*, hæmostasis was secured entirely by means of pressure-forceps, no sutures or ligatures having been used. The cervical canal was first stuffed with absorbent cotton, and closed with a single suture, which was passed through the anterior and posterior lips. This was done in order to prevent any of the contents of the uterus from coming in contact with the perineum, in case it was found necessary to turn the cervix into the pelvic cavity. The cervix, seized with strong lock vulsellum forceps, was drawn to the vulva, and an incision was made with scissors entirely around the cervix at the utero-vaginal attachment; with the finger the post-cervical structures were torn away from the cervix, keeping close to the uterus until the cul-de-sac of Douglas was reached; with two fingers in the cul-de-sac of Douglas, it was easy to enlarge this opening by tearing, until I had reached the region of the broad ligament on either side; I then attempted to divide anteriorly in the same way, but, being solicitous about invading the bladder, I kept so close to the uterus as actually to tear up a layer of the muscular structures. I had carried this process beyond the vesico-uterine attachments, indeed almost to the fundus, before I discovered that I must be beyond the region of the bladder. I did not at once enter the anterior cul-de-sac, but, taking a pressure-forceps with long blade in the right hand, I passed the index finger of the left through the posterior opening, and hooked the point of the finger around the left broad ligament; then, with the lower blade of the forceps in the posterior opening I punched through to the finger tip with the other blade, and locked the forceps, thus securing the left broad ligament. The right broad ligament was secured in the same way, and the utero-vesical attachment severed with the scissors and the uterus removed. Upon putting the forceps upon the right broad ligament, and finding that the disease had extended through the uterine wall on that side and involved the uterine end of the right broad ligament, I pulled the ligament out and put on another pair of forceps back of those originally used. These forceps included the ovary and Fallopian tube on that side, and I hope all the disease.

The only difficulty in this operation was in consequence of extensive adhesions of the uterus posteriorly to the small intestine. At least twenty minutes were consumed in carefully breaking up these

adhesions. The right ovary and tube came down and were secured in the grasp of the forceps, but the patient having passed the menopause, the left were not removed. Several bleeding points anterior and posterior to the uterus were secured by means of ordinary pressure-forceps, all of which were left in the vagina.

Instead of closing the abdominal wound with sutures, the peritoneal edges anteriorly and posteriorly were caught at two points with lock-forceps, so that in reality the peritoneal wound was closed at these points, leaving space enough between the forceps for drainage. All the forceps except those on the broad ligaments were removed in twenty-four hours; these were removed at the end of forty-eight hours. It would possibly be safe to remove even the forceps from the broad ligaments in twenty-four hours, but leaving them forty-eight hours is an additional safeguard and insures more prompt separation of the necrosed tissues within their grasp.

The patient had no bad symptom until the fourth day after the operation, when she developed a slightly elevated temperature and a pulse of 140, very weak and almost like the pulse of collapse, but with a moderate amount of stimulation, circulation greatly improved and was normal again in twenty-four hours. It is now three weeks since the operation, she has had no further trouble, and is sitting up. I learned after this trouble with the circulation what I had not recognized before, and what would have deterred me from operating had I known it, that the patient had a fatty heart.

I think this method of removing the uterus will be generally adopted. The operation in this case lasted forty minutes. If it had not been for the adhesions it could have been done in twenty minutes without difficulty.

This operation may have a wider field than vaginal hysterectomy; I have determined that the next case I have of uterine myoma, in which supra-vaginal hysterectomy would ordinarily be performed, to open the abdomen, lift the tumor out through the abdominal wound, and then, instead of using the serre-nœud, to secure the broad ligaments by means of lock-forceps in the vagina. It would probably be easy, by having the index and middle fingers in the pelvic cavity, one on either side of the broad ligament as a guide, to force the blades of the forceps through close to the uterus on either side of the ligament to the finger tips, and then, having secured both ligaments, sever the anterior and posterior uterine attachments. The peritoneal edges of the vaginal wound might then be closed with a continuous catgut suture, or seized with lock-forceps in the vagina, as already described. This method of performing hysterectomy for myoma when the tumor is too large to be delivered through the vagina, is worth trying; it would enable the operator to dispense with all extra-peritoneal methods of hæmostasis, and might afford all the advantages which belong to intra-peritoneal hæmostasis for ovariotomy.

THE PRESIDENT reported

A CASE OF VAGINAL HYSTERECTOMY,

and exhibited specimen.

Miss P., is a virgin, 57 years of age; ceased menstruating over ten years ago. About eight months ago she had a slight hæmorrhage from the uterus, and for five months before the operation had been bleeding (sometimes profusely) most of the time. She had been bedridden for five weeks, suffered frequently with severe pain in the lower part of the abdomen, and was the most waxy, anæmic looking person I remember to have seen. Her pulse ranged from 100 to 120. Her evening temperature, from the normal in the morning, ran up to 101° F., and sometimes higher upon the few evenings before the operation. When not bleeding she had an offensive vaginal discharge. She was subject to daily hysterical attacks in which she and her friends feared she might die. A loud, cardiac murmur could be heard. Vaginal indagation revealed a friable vascular mass about the size of a hen's egg, projecting from the cervix into the vagina, and continuous with the posterior lip. A piece taken from the lower end was examined and pronounced papilloma. I had considered it cancer and had contemplated hysterectomy, but felt relieved at the diagnosis, because the operation would have been long and difficult on account of the virgin and senile condition of the vagina and perineum, and the success would have been doubtful by reason of the extreme anæmia and nervous prostration. I also feared she would not bear anæsthesia well for the necessary length of time.

She was anæsthetized at 9 A.M., Dec. 7, for the purpose of curetting, but the posterior wall of the cervix as far as the internal os was found so degenerated that a complete removal was considered impossible without breaking into the cul-de-sac of Douglas. The posterior vaginal wall was also infiltrated behind the cervix. Therefore I resolved to take out the uterus, and did so at 1:30 P.M. The method I employed proved so successful and seemed so well adapted to her case that I think it worth while to mention it and advise it for cases presenting similar difficulties. After a thorough disinfection of the parts, I introduced suture of juniper catgut around the vaginal fornices so as to make a circle of ligatures. I made a bloodless incision inside of the circle, commencing in front and separating the bladder and the broad ligaments for a short distance at the sides before introducing the posterior sutures, completing the circular incision posteriorly, and opening the peritoneal cavity. Scarcely half an ounce of blood was lost. After opening the cul-de-sac its entire width, a pair of hemostatic forceps was placed on the left sacro-uterine and base of the left broad ligament, and the uterus cut loose on that side as far as the forceps reached. The maneuvre was then repeated on the other side. Then another pair of forceps was placed on each side just above the first, and the tissue severed as high as they extended. A third pair on each side included the Fallopian tubes, and enabled me to cut out the uterus with the loss of less than an ounce of blood except that which had oozed from the diseased cervix. Some iodoform gauze was stuffed in between the forceps. The forceps were removed at the end of twenty-eight hours, with great distress to the patient and followed by a temporary

rise of temperature from 99.4° to 100.4° F. The temperature went down, however, and did not rise that high again until the beginning of fhe fifth day, when it again went up to 100.4 F., but subsided upon removal of the tampon, which had become offensive. She turned on her side at the beginning of the fourth day. The bowels were moved on the fifth day by a Seidlitz powder. After the removal of the iodoform gauze on the beginning of the fifth day, vaginal douches with a tube for the return flow were used twice a day. After the sixth day they were carbolized.

Having performed the operation both ways, viz., with and without hemostatic forceps, I feel justified in asserting that ligatures are better for cases in which the size of the vagina and mobility of the uterus allow of their application without too much loss of time, for there is less bruising of the broad ligaments and less sloughing afterwards. They may be left long and used instead of sutures to draw the stumps together over the vaginal opening. For cases in which time is an important element, and the broad ligaments cannot be rapidly ligated, the forceps are preferable. In the hands of the beginner they are safer because they may be applied with less handling and exposure of the peritoneum, and are not liable to be followed by hæmorrhage. Ligation of the vaginal walls before cutting can be done so quickly and easily that it is a desirable procedure in all cases.

The growth, as you see, has extended as high as the internal os, with the main part of it taken off it looks like an epithelioma of the cervix. The uterus is small in size. Sarcoma, originating in the cervix, would seem to be a rare occurrence, and this one case is, as far as I can determine, the thirteenth one recorded. One has been recorded by G. Veit ("Handbuch der Speciellen Pathologie," etc.,von Virchow); one by Scanzoni ("Lehrbuch der weiblichen Sexualorgane"); one by Kunert (*Archiv. für Gynäkologie* Bd. VI, p. 113); one by Leopold (*Archiv. f. Gyn.*, Bd. VI., p. 493); one by Grenser (*Archiv. f. Gyn.*, Bd. VI., p. 501); two by Spiegelberg (*Archiv. f. Gyn.*, Bd. XIV., p. 178, and Bd. XV., p. 437); one by Rein (*Archiv. f. Gyn.* Bd. XV., p. 187); one by Winckler (*Archiv. f. Gyn.*, Bd. XXI., p. 309); one by Schwartz (Beerman, Inaug. Diss., Göttingen, 1876); one by Zweifel (*Centralblat für Gyn.*, 1884); Hunter (*Am. Journal of Obstetrics*, Vol. XVII., p. 523), and this one. Some of these were not primary sarcomas, but were developed secondary to other growths, such as papilloma, fibroma, etc.

Report of Pathologist.—Microscopical Examination of the Cervix.—On the surface the growth presents the structure of papilloma, *i. e.*, villous projections consisting of a connective-tissue stroma covered over completely by several layers of ovoid cells. Upon the surface of these there is a single layer of columnar epithelium. In the specimen this has been stripped off on part of the surface. The columnar epithelium is not as tall and less delicate than that of the normal mucosa.

Normal Mucosa.—At the base of these villi the tissues are considerably altered. They consist largely of granulation cells. The normal glandular elements have quite disappeared in some parts, in others they are greatly modified; the cells lining the follicles being irregular, ovoid, or spindle-shaped.

Many of the glands are quite replaced by sarcoma corpuscles.

In some points of the specimen there occurs a delicate network of branching cells, presenting the characteristic appearance of myxoma. These portions are considerably softer than the surrounding structure.

Diagnosis.—Papilloma at surface. Myxo-sarcoma at base.

The disease was probably primarily simple papilloma, and is now in the stage of transition to sarcoma. MARIE J. MERGLER.

DR. J. H. ETHERIDGE: I understood Dr. Byford to say that a portion of the growth involved the vagina also, and I would like to ask him if he could follow up the broad ligament well enough to find if there was any involvement of that structure.

DR. BYFORD: I did follow it up and put on the forceps.

DR. ETHERIDGE: I saw a case about two weeks ago that was very interesting and instructive to me. It was the removal of the uterus for cancer of the cervix. Upon examination, at first we thought we could not take it out, but as the whole cervix was involved and it had spread over the sides of the vagina, the left side a very little and considerably upon the right side, it was concluded to go on and do the operation. The operator freed the cervix from the vagina and then commenced the peeling up process, the broad ligaments were exposed, and the forceps put on, and the uterus cut away. In the left broad ligament, throughout its whole extent to the pelvic wall, there were nodular enlargements, showing that the broad ligament itself was involved, and that, too, upon the side in which there was the least encroachment of the vagina; on the right side there was no involvement of the broad ligament. There were eight or nine forceps left in the vagina, which were removed at the end of forty-eight hours without any trouble. She has recovered from the operation nicely. I have often wondered how the broad ligament appeared when infiltrated with cancerous material, and I think now that I know.

If the case Dr. Dudley reported is the one I saw, and he did not speak of one thing, I would like to speak of it, and that was a clever bit of ingenuity on the part of a clever operator in retroflexing the uterus. If I remember rightly, he attempted to push it down and draw it down from beneath without avail, and then, by taking a pair of vulsellum forceps, he grasped the uterus just above the vaginal attachment and drew it down, then took another forceps and drew it down a little more, then another, and so on, and in that way got the uterus down easily; which impresses one who has had trouble in getting the uterus down within reach.

Since the October meeting, at which a paper of mine on this subject was read by title, another case has passed through my hands which I have not reported to this Society. It was a case in which there

was a development of a small fibroid tumor in the posterior uterine wall. All attempts at retroflexing or retroverting the uterus were unavailing, and it had to be removed by detaching the broad ligaments which the uterus turned upward. The patient has gone along without trouble and has made a complete recovery. The uterus was removed for incoercible hæmorrhage. Everything else had been tried, scraping, stimulating applications, ergot, etc., and the operation which was expected to be performed was removal of the ovaries. But as I had had the experience of removing two pairs of ovaries for bleeding fibroids, and they kept on bleeding, I explained to her the difference between removal of the uterus and the ovaries, and she finally accepted removal of the uterus.

I believe one of the greatest advantages of the forceps over the ligature is the superior facility for free drainage. All fluids will run down through the opening in the vagina left by the forceps, in a perfect manner, and there is no danger of the fluids remaining in the peritoneal cavity by the closing of the top of the vagina, which is speedily brought about. After the patient is put to bed, it is but a few hours before we have a closed cavity in which fluids may decompose and septic peritonitis ensue, unless effective drainage, such as the forceps afford, be used. I think that one advantage over the ligature is enough to induce every operator to use the forceps.

DR. JACKSON: It occurred to me, in examining this specimen, that it was not necessary to remove the entire uterus. High amputation of the cervix would have removed all of the disease and would have lessened the danger to the patient.

I want to refer to a point in Dr. Dudley's remarks with reference to the attachment of the sarcoma to the uterus by a pedicle. I desire to ask whether that is a usual method of attachment of a sarcoma? In the cases of uterine sarcoma that I have seen the disease commenced on a flat surface—the attachment was sessile. I once saw a case which I at first supposed was one of sarcoma, but subsequent examination with the microscope determined that it was not a sarcoma, but a degenerated fibrous polypus,

These microscopic examinations of malignant diseases, by the way, are not always reliable; in my own experience I have received three widely differing reports, all made by competent persons, and from the same specimen, so that I must confess I have less confidence in the microscope as a diagnostic instrument than I formerly had. I regret this very much because, in many cases, we depend almost entirely on investigations to determine our diagnosis and treatment.

DR. PARKES: I was exceedingly interested in Dr. Dudley's case, and especially in the manner of securing the broad ligaments by means of forceps. I had the pleasure of witnessing the use of these forceps by the person who first invented them, Péan, of Paris. In 1883 I did the first operation that has come under my care for removal of the uterus per vaginam by this method. In 1886 I did it again, and during the early part of this year I removed three uteri, and in in each of them I employed the method that has been described this evening, the use of the snap forceps in controlling the broad ligaments, instead of ligatures. After listening to a report of similar cases by Dr. Etheridge, I remarked that I did not see why, in this method, the uterus should be retroverted; that so far as my experience went, I found no difficulty, after the division was made in the cul-de-sac of Douglas, in reaching the top of the broad ligaments with my finger, and found no difficulty in severing the attachment, and had no subsequent difficulty from hæmorrhage. I can very well see that occasional cases will be met with where it will be difficult, if not impossible, to reach the top of the broad ligament so as to be sure that every portion is included in the grasp of the forceps, as in Dr. Byford's case, and in another case I saw where the uterus had in its posterior wall a large tumor, and where it was with great difficulty removed. .In these instances it may be necessary to reverse the uterus. The objection to reversal is, that it twists the broad ligameuts, and we know that any instrument used for pressure acts better the thinner the tissue that is engaged in the forceps.

It is only lately that very much has been said in the journals about the use of forceps instead of ligatures. Within the last two years an article has appeared in the journals by a French gentleman who has reported some forty cases operated upon in this way. The objection that comes to my mind, in the use of these forceps in operation for myomata of the uterus and large size is that, in the cases I have seen, the broad ligament has been carried up with the uterus to such heights above the top of the vaginal wall that no forceps I have seen would embrace all the tissues. Still the plan would be good; abdominal section would enable one to tie the broad ligaments half way down to the uterine arteries, and then the forceps could be used.

DR. E. C. DUDLEY, in closing the discussion, said: Dr. Jackson has asked for my experience relative to the question whether sarcoma is apt to be attached to the uterine wall by a pedicle. Sarcoma of the uterus is too rare to permit any one operator to speak from experience. It is, however, true that sarcoma may be attached to the uterine wall by a broad or narrow pedicle; on the other hand, as Dr. Jackson says, it may be intramural. This tumor had a very short pedicle; the growth filled and distended the entire uterus; there was perhaps a pound of sarcomatous tumor in the uterus at the time of my first operation, three or four weeks before the second.

I have more confidence in the accuracy of pathological observations through the microscope than Dr. Jackson, never having had occasion to question the diagnosis of a pathologist, although, like Dr. Jackson, I have frequently employed two or three microscopists to examine the same specimen independently, but I have always taken care to employ good pathologists, of whom Dr. Wing is one.

The objection of Dr. Parkes against the operation which I have indicated for removing myomata and securing the broad ligaments by means of lock forceps in the vagina would not render the procedure impracticable. The broad ligaments could easily be

stripped from the uterus until it became possible to include them in the grasp of the forceps. For this operation it would be well to have, in addition to the ordinary forceps, four pairs of forceps with very long blades, two of which could be fastened on either broad ligament close to the uterus, and the ligaments could be divided between them, then the ordinary forceps might be passed through the vagina with their blades on either side of the remaining portions of the broad ligaments. After removing the uterus, the entire broad ligament on either side could then be grasped in a single pair of vaginal forceps, which should have longer and stronger blades than for ordinary vaginal hysterectomy, on account of the great hypertrophy of the ligaments.

Dr. Byford considers the method of Péan inferior to that of the ligature for certain cases in vaginal hysterectomy. Péan's method seems to me better and safer for all cases. The hæmostasis can be more quickly secured by the forceps than by the ligature. A single pair of forceps will secure a mass which would require several ligatures. The hæmostasis is almost absolute when secured by the forceps, but is uncertain with the ligature. After the forceps have been left on for forty-eight hours there is necrosis of that portion of the ligaments within their grasp, and we thereby get rid of it. Not so with the ligature mass; it must remain as a slough, sometimes for many days. Moreover, after a ligament is found to be involved in the disease for which the uterus is being removed, it may be easily drawn out by means of the forceps first applied, the surrounding tissues stripped off, and another forceps applied back of the first ones. This would be very difficult, sometimes impossible, with the ligature. The mortality of this operation may perhaps be reduced as low or lower than that of ordinary ovariotomy. It is certainly an easier operation than ovariotomy with adhesions. The hæmostatic forceps have indeed changed a very formidable operation to a very simple one.

Retroverting or inverting the uterus through the opening posterior or anterior to the uterus and bringing the fundus into the vagina is objectionable. First, some of the contents of the uterus may get into the peritoneal cavity and make trouble. Second, the body of the uterus in the vagina fills it so full as to leave very little space in which to complete the operation. It will always be well, however, as a precaution against infection of the abdomen from the malignant disease, to tampon the uterine canal with cotton and close the os externum with a suture, so that if it become necessary to retrovert or antevert the uterus nothing can get out. Iodoform gauze was used as a vaginal tampon in this case; when removed in twenty-four hours, it was found to be fetid, and therefore seemed rather an element of danger than of safety. It also interfered with drainage. If used at all, it should be placed between the forceps and the vesico-vaginal septum, where it would not be so liable to obstruct drainage as if placed between the forceps and the recto-vaginal wall. It would always seem desirable to close the peritoneal edges of the wound with lock forceps, as was done in this case. They did not close the wound enough to prevent drainage and they do protect the patient against the danger of protrusion of abdominal viscera in case of severe retching, vomiting, or coughing.

DR. H. T. BYFORD: I cannot agree with the last speaker that iodoform gauze interferes with drainage and favors decomposition. As the vagina cannot well be douched during the first few days, the secretions must accumulate until forced or drawn up through the vaginal entrance, which, in the dorsal decubitus, is the highest end of the vaginal canal. By placing a small roll of iodoform gauze well up against the stumps (drawn down by the ligatures), and then stuffing in a long narrow strip so as to fill the vaginal canal loosely, and extend out to a dry piece of gauze between the labia, we can drain off the fluid portionof the exudations by capillary drainage, promote hæmostasis, prevent prolapse of the intestines, support the base of the bladder, and keep the stumps stationary until an exudate has fixed them and closed the peritoneal cavity.

As to the advantage of the forceps in enabling us to remove more of the broad ligaments, I think that the less of the broad ligament removed the better. If the disease has extended into the ligament, the operation should not be performed. I think that the proposed combination of the abdominal and vaginal methods by the application of the hæmostatic forceps from the vagina is more complicated, more difficult, and more dangerous than supra-vaginal amputation or abdominal hysterectomy. Hæmostasis can be secured without it. In case the cervix must, on account of the disease, be removed with the uterus through the abdomen, then the forceps might be applied from below, but the mortality would, in the nature of the case, be greater than that of vaginal hysterectomy or supra-vaginal amputation.

In answer to the criticism that a high amputation of the cervix would have been preferable, I will say that the cervical wall was so deeply invaded that the cul-de-sac would have necessarily been opened. Had it not been opened, there was not enough vaginal wall to cover the raw surfaces, and the hæmorrhage that would have occurred, and the suppuration afterward, whether the cautery had been applied or not, would have been much more liable to kill this feeble patient than hysterectomy. The septicæmic symptoms disappeared in a day, and the anæmia is daily diminishing. In some cases, vaginal hysterectomy is the safer operation.

DOMESTIC CORRESPONDENCE

A REMEDY FOR TÆNIA.

Dear Sir:—It occasionally happens that one remedy after another fails to expel a tapeworm, even though the patient is placed under proper and restricted diet before the medicine is given. A case of this kind came under my observation—a boy, aged 13 years. The diagnosis, as is usually the case, was very readily made, from the fact that the boy pulled out several joints of the tænia from his anus

as proof of his ability to make the diagnosis. Turpentine, pomegranate bark, pumpkin seed, extract of male fern, and chloroform were given at different times, with the effect of expelling the greater portion of the worm, but they failed to bring away the head. Some of these drugs were given the second, and even the third time.

After failing with the anthelmintics that had been hitherto successful in my hands, I concluded to give salicylic acid (as mentioned in Bartholow's "Materia Medica," 6th ed.). The boy was given 8 gr. doses every hour, until five doses were taken, a dose of castor oil preceding, and one after the last dose of the acid. The result was that the worm was expelled entire with the operation of the oil.

J. F. JENKINS, M.D.

Tecumseh, Mich., March 2, 1888.

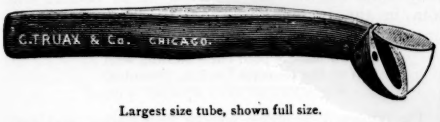
NEW INSTRUMENTS.

AN IMPROVED LARYNGEAL TUBE.

Exhibited and Described to the Chicago Medical Society, February 20, 1888.

BY F. E. WAXHAM, M.D.,
OF CHICAGO.

Unexpectedly I found my name upon the programme to-night. I regret it because I did not intend to present these instruments until I had some further experience. My experience with these modified tubes is limited to four cases, which of course are too few to allow me to speak with authority in regard to them. The most earnest advocates of intubation have never claimed that the operation has been fully developed, and it will undoubtedly be years before the instruments are perfect. This new device is the outgrowth of the rubber epiglottis that I have used considerably. The rubber attachment in many cases worked admirably but would often fail, partly due to the disarrangement of the epiglottis on



Largest size tube, shown full size.

introduction, or more frequently, perhaps, to disarrangement afterwards from frequent coughing, so I have long been at work trying to find some way by which we could close the upper opening of the tube without danger of any disarrangement upon introduction or later by the coughing. I have devised this metal epiglottis, that acts by means of a spring made of piano wire, which is embedded in the upper part of the tube. This epiglottis works very lightly indeed. As the child swallows the epiglottis falls and the larynx rises, and this metal attachment covers completely the upper opening of the tube and when the swallowing ceases the spring forces it upward. The only danger I see from this instrument is from the rusting of the wire and its breaking if used too long without being changed. If made of gold it will not be necessary to change the spring so frequently.[1]

My first case was seen in consultation with Dr. Quine. The patient was a little child 4 years old. Several months previously the child had suffered a severe attack of nephritis and had never fully recovered. Four or five weeks ago the child had an attack of scarlet fever; the nephritis was aggravated and the amount of albumin in the urine greatly increased. Following scarlet fever came diphtheria, and the larynx becoming involved it seemed a hopeless case, on account of the complications. To relieve the urgent dyspnœa, the O'Dwyer tube was inserted, but scarcely with the expectation of recovery. During the first thirty-six hours there was almost entire suppression of urine. The child was frantic for water and as every attempt at drinking caused violent coughing it was thought best to remove the tube hoping the child could breathe without it. The tube was removed and a membranous cast about two inches in length was expelled, but it was impossible for the child to breathe without the tube and this modified one was introduced. There was a great contrast between the ability to swallow with this tube and the other. The child died, however, about eight hours later from uræmic poisoning.

The next case was seen in company with Dr. Parsons. This was almost a malignant case of diphtheria. There was albumin in this case also, and it seemed, if possible, more hopeless than the other. There was repugnance to food of any kind; the child would not take nourishment before the tube was introduced, and of course there was the same difficulty afterwards. When she would make the effort she could swallow without difficulty. This child died about thirty-six hours after the operation.

The next case was seen through the courtesy of Dr. Roberts, of Lemont. There was some diphtheritic infection, several children in the family had had sore throats and there had been small spots seen on the tonsils. The child had been suffering urgent dyspnœa for forty-eight hours; I never have seen more urgent dyspnœa than in this case, there was very deep sinking in of the thorax with every inspiration, the pulse was rapid and feeble, and the child could have lived but a few hours longer. This tube was introduced and the child was able to take nourishment very nicely and without coughing, and took liquids comfortably. The child wore the tube forty-eight hours and expelled it, and has made a good recovery.

The next case was seen at Blue Island, through the courtesy of Dr. Kaufman. The child still wears the tube. The child was 5 years old and suffered from urgent dyspnœa, this form of tube was introduced and he was able to swallow water without coughing, but after the tube had been in about half an hour he rejected it, it was reintroduced and he rejected it again. A larger tube was introduced which has been retained ever since. The report is favorable, and as the child has worn the tube this long we shall hope for a recovery in this case.

[1] Since reporting the above Truax & Co. have constructed for me a non-corrosive spring.

I think if we are able to allow a child to take fluids a larger proportion of them will recover. Many children object to semi-solid food and it is difficult to feed them, while they would more readily take liquids which would often agree with them much better. While these tubes may still need some changes I confidently expect that they will answer the purpose.

NECROLOGY.

LEVI HOWARD, M.D.

Levi Howard, M.D., was the son of Deacon Levi Howard and Mary Howard, *nee* Houghton, and was born in Bolton, Mass., in May, 1820, being at his decease nearly 65 years old. His father was a farmer in comfortable circumstances, and the son passed his boyhood and youth upon the farm, receiving a common-school education in his native town, continuing his studies at Worcester and at Bridgton Academy, Me. He then taught school a few terms "on the cape" and in Bolton, afterwards beginning the study of medicine under the direction of his uncle, Dr. Lewis W. Houghton, of Waterford, Me. He attended one course of medical lectures at Bowdoin College, and then entered Dartmouth Medical College, graduating at the latter in 1845.

After graduation he practiced with his uncle, Dr. Houghton, in Waterford for three months. While here he married Miss Lydia J. Hapgood, and soon moved to Still River, Mass., a village of Bolton, and here practiced his profession two years. In 1848, learning that Dr. Francis Kittredge, of Chelmsford, wished to resign his lucrative practice to take up his residence in California, Dr. Howard went to Lowell, where he has ever since resided, enjoying in a marked degree the confidence and esteem of the community, as evidenced by the constant and ever increasing demands for his professional services.

Dr. Howard was a member of the Massachusetts Medical Society, of the North Middlesex Medical Society, was at one time president of the latter, and held all the various offices in its gift, and of the American Medical Association from 1865. During Gov. Talbot's administration he was appointed a trustee of the Blind Asylum at South Boston. Never taking an active part in politics, he yet consented several years ago, yielding to the earnest solicitation of friends, to become a candidate for the office of representative in the State legislature. In so doing, he was in part influenced by the belief that the change would afford him the rest which he needed from the exacting duties of his profession. He was, however, unsuccessful, and, paradoxical as it may seem, his personal popularity and professional ability contributed to his defeat. Many of his personal and political friends neglected to go to the polls, feeling that his election was sure, while others voted against him, fearing that his medical services could not be had when wanted; so that, through the over-confidence of his friends, rather than the strength of the opposition, he failed to secure the only political office he ever sought. In his religious views he was a Baptist, and while a member of the church, and a firm believer in the doctrines of this denomination, he was never narrowly sectarian. For several years he was a deacon of the Central Baptist Church, gave largely to the erection of its meeting-house, and always contributed liberally to the support of public worship. Two of his sons adopted their father's profession; the elder, George L., a young man of much promise, died before he had completed his studies; the other, Dr. Amasa Howard, has been associated with his father the past two years, meriting and receiving the favor of the community. Besides these, Dr. Howard's only students have been the brothers Dr. Samuel L. Dutton, of Boston, and Dr. Charles Dutton, of Tyngsborough, for both of whom their preceptor always cherished the warmest friendship, and whose success in their chosen profession is most creditable alike to instructor and pupil.

In June, 1884, Dr. Howard, knowing well the nature of the malady fastened upon him, left his practice in charge of his son, and in company with his devoted wife, sailed for Europe, where he spent several months; but it now seems evident that it was too late to secure even a temporary benefit from change of climate and occupation.

Not fluent in speech, his thoughts were always expressed in terse, well chosen language. He never jumped to conclusions, and the diagnosis of every case entrusted to his care was the result of a most minute and careful examination. Before age and disease had impaired his bodily vigor, his very appearance at the bedside of the sick fairly rivalled the efficacy of the contents of the medicine chest, causing many a patient to feel if not to say that his presence "doeth good like a medicine." Another, and by no means the least prominent trait of his character, was his kindness to the poor, and many are they who, without money and without price, have received the benefit of his skill and advice; and when his body shall have been laid in the grave, not they alone but the more fortunate, all classes will join in the benediction contained in the poet's lines:

> "How many a poor one's blessing went
> With thee beneath the low, green tent
> Whose curtain never outward swings."

Dr. Howard leaves a widow, three sons and two daughters. One son, associated with his father, has already been named, one is in his senior year in Harvard College, and the third is studying for the profession of architect. Of the daughters, one is the wife of Prof. J. H. Willoughby, principal of the Middleborough High School, and the other a teacher in London, England.

The death of Dr. Howard makes a void in this community not easy to fill. Fortunate, indeed, will be his successor if he shall win the respect, esteem and confidence bestowed in so large measure upon the honored physician who has gone to his final rest.

GARRETT R. BALDWIN, M.D.

Dr. Garrett R. Baldwin died at his home in the city of Ft. Scott, Kansas, on March 4, 1888, after a prolonged illness, at the age of 47 years. He was born at Saugerties, Ulster Co., New York, on May 13, 1840, his boyhood days being spent in his native village where he attended the common schools. When he was quite young his father moved to Michigan, where Garrett attended the Academy at Tecumysset, and afterwards the literary department of the University of Michigan. In 1857 he commenced the study of medicine with Dr. Wood, of Monroe, Mich., as preceptor, matriculating at the Medical Department University of Michigan, in 1859, and again in 1860. In the fall of 1861 he entered the army, enlisting in the 18th Mich. Vol., served a time as hospital steward until commissioned as assistant surgeon, remaining with his regiment until the war closed. In the fall of 1865 he matriculated at Bellevue Hospital Medical College, graduating the following spring, 1866. During that summer he located at Ft. Scott, Kansas, and commenced the practice of medicine, continuing without intermission until stricken down with his fatal illness. He was noted for faithfulness to his chosen profession, and honored by all who knew him, beloved by his patrons and patients for his kindness and sympathetic nature. He held the position of city physician in 1867 and 1868, county physician in 1868 and 1869; in 1870 he was appointed surgeon for the examination of pensions, president of the board for the same purpose from its organization in 1880, until the present administration made a change. He was an active member of the State, South-East Kansas, and Vice-President of the Bourbon County Medical Society. He represented the State Medical Society at the session of the American Medical Association, held in New Orleans, in 1885, and again at Chicago in 1887. He made several contributions to medical literature, notably a paper on "Continued Fever," read before the Kansas State Medical Society in 1883. In 1867 he was married to Anna E. Johnson, an estimable lady, who, with two sons, survives him. Mankind was beautified by his labors, and the world seemed better because such a man lived.

F. F. D.

JOHN HOMER DIX, M.D.

John Homer Dix, M.D., was the son of John Dix, Surgeon in the U. S. Navy. He was born in Boston, 1813, graduated from Harvard College in the class of 1833. He began the study of medicine with Dr. John Jeffries, receiving his degree of medicine from Jefferson Medical College in Philadelphia, 1836. He became a member of the Massachusetts Society in 1837, making the diseases of the eye and ear a specialty; he commenced practicing in Boston about this time. In 1846 he visited Europe to avail himself of the hospital advantages and became one of Professor von Graefe's pupils. He was a man of laborious study and great self confidence, strict integrity, genial in disposition, kind to the poor, and a great lover of music. Among his writings (although not numerous) I find a (Boylston) Prize Essay on "Morbid Sensibility of the Retina". He joined the American Medical Association in 1849, and attended meetings in 1864 and 1865. He contributed some valuable works to the literature of his profession. After a successful practice for nearly fifty years, he died at the Isle of Shoals, August 25, 1884, bequeathing in his will a large portion of his estate to charitable institutions. His widow survives him.

M. G. P.

H. C. HOWARD, M.D.

Dr. H. C. Howard, of Akron, O., died April 23, 1887, at his residence, at 45 years of age. Dr. Howard was born in Akron and received his literary education in the city schools. He studied medicine with his father, Dr. E. W. Howard, after which he attended two courses of lectures in Cleveland, O., and then completed his medical education in Bellevue Hospital Medical College, New York City, in 1871, after which he entered into partnership with his father, which continued until the time of his death. His cheerful, happy disposition robbed the sick-room of its gloom. No call was ever made for his services which did not receive his prompt attention. His untiring devotion to his patients was rewarded by a large and lucrative practice.

Dr. Howard was always an earnest student, keeping his library filled with the latest works on surgery and medicine. His judgment was remarkably good, and his convictions firm. As a physician he ranked high among his professional brethren. He was kind, good hearted and genial, and never forgot the calls of charity. His genial, social and good-natured disposition made him many friends. All deeply mourn the loss of a warm friend, a good neighbor, an honorable citizen, and a devoted physician.

MISCELLANEOUS.

AMERICAN PUBLIC HEALTH ASSOCIATION.

THE LOMB PRIZE ESSAYS FOR 1888.—Mr. Henry Lomb, of Rochester, N. Y., offers through the American Public Health Association, two prizes for the current year, on the following subject: "Practical Sanitary and Economic Cooking Adapted to Persons of Moderate and Small Means." First Prize, $500, Second Prize, $200; Judges, Prof. Charles A. Lindsley, New Haven, Conn., Prof. George H. Rohé, Baltimore, Md., Prof. Victor C. Vaughan, Ann Arbor, Mich., Mrs. B. H. Richards, Boston, Mass., Miss Emma C. G. Polson, New Haven, Conn.

Conditions.—The arrangement of the essay will be left to the discretion of the author. They are, however, expected to cover, in the broadest and most specific manner, methods of cooking as well as carefully prepared receipts for three classes,—(1) those of moderate means; (2) those of small means; (3) those who may be called poor. For each of these classes, receipts for three meals a day for several days in succession should be given, each meal to meet the requirements of the body, and to vary as much as possible from day to day. Formulas for at least twelve dinners, ~~to be carried~~ to the place of work, and mostly eaten cold, to be given. Heathfulness, practical arrangement, low cost, and palatableness should be combined considerations. The object of this work is for the information of the housewife, to whose requirements the average cook-book is ill adapted, as well

as to bring her attention to healthful and economic methods and receipts.

All essays written for the above prizes must be in the hands of the Secretary, Dr. Irving A. Watson, Concord, N. H., on or before Sept. 15, 1888. Each essay must bear a motto, and have accompanying it a securely sealed envelope containing the author's name and address, with the same motto upon the outside of the envelope.

After the prize essays have been determined upon, the envelopes bearing the mottoes corresponding to the prize essays will be opened, and the awards made to the persons whose names are found within them. The remaining envelopes, unless the corresponding essays are reclaimed by authors or their representatives within thirty days after publication of the awards, will be destroyed, unopened, by the Secretary.

None of the judges will be allowed to compete for a prize.

The judges will announce the awards at the Annual Meeting of the American Public Health Association, 1888.

It is intended that the above essays shall be essentially American in their character and application, and this will be considered by the judges as an especial merit.

Competition is open to authors of any nationality, but all the papers must be in the English language.

The subjects selected and successful competitors in the past three years are as follows: 1. "Healthy Homes and Food for the Working Classes," 62 pages, by Prof. V. C. Vaughan, of the University of Michigan; 2. "The Sanitary Conditions and Necessities of School-Houses and School Life," 38 pages, by Dr. D. F. Lincoln, of Boston; 3. "Disinfection and Individual Prophylaxis against Infectious Diseases," 40 pages, by Major G. M. Sternberg, Surgeon U. S. Army; and 4. "The Preventable Causes of Disease, Injury, and Death in American Manufactories and Workshops, and the Best Means and Appliances for Preventing and Avoiding Them," 19 pages, by Mr. George H. Ireland, of Springfield, Mass.

These may be obtained at the book stores, or of Dr. Irving A. Watson, Secretary, Concord, N. H., at the following rates: Single copies, No. 1, 10 cents; Nos. 2, 3, and 4, 5 cents each. The entire four essays in pamphlet form 25 cents, or in cloth binding at 50 cents or 75 cents, according to style of binding and paper. The desire is to distribute these as widely as possible among the poorer and middle classes.

THE NEXT MEETING OF THE ASSOCIATION OF AMERICAN MEDICAL EDITORS.—The following programme has been arranged for the meeting at Cincinnati, Monday evening preceding the meeting of the American Medical Association, May, 1888:

Meeting called at 8 P.M.

Reading of minutes.

President's Address, William Porter, M.D., of St. Louis.

Report of Committee on Organization, Dr. McMurtry, Chairman, Danville, Ky.

Election of officers for ensuing year.

Extraordinary business.

Questions for consideration:

1. Is the multiplicity of medical journals an advantage to the profession? To be discussed by Drs. Crothers, Hartford; Sim, Memphis; Wile, Conn.; Love, St. Louis; Culbertson, Cincinnati; Cushing, Boston; Coomes, Louisville; and Gray, Chicago.

2. How far do medical journals distributed by drug houses and manufacturers interfere with regular medical journalism? To be discussed by Drs. Reynolds, Louisville; Davis, Chicago; Shoemaker, Philadelphia; Bond, St. Louis; Connor, Detroit; Kiernan, Chicago; Thacker, Cincinnati; and Fulton, St. Paul.

Members are requested to limit their remarks to fifteen minutes, and if possible to ten; The place of meeting will be posted in all the hotels by the local committee. Arrangements can be made at this meeting for a "press dinner" for another evening during the week, but it will be impossible to conclude the business of the Association and have the dinner the same evening.

HEALTH IN MICHIGAN, FEBRUARY, 1888.—For the month of February, 1888, compared with the preceding month the reports indicate that bronchitis, influenza, and measles increased in prevalence.

Compared with the preceding month, the temperature in the month of February, 1888, was higher, the absolute humidity, the relative humidity, and the night ozone were more, and the day ozone was less.

Compared with the average for the month of February in the nine years, 1879-1887, measles increased, and diphtheria, consumption of lungs, pneumonia, intermittent fever, and scarlet fever were less prevalent in February, 1888.

For the month of February, 1888, compared with the average of corresponding months for the nine years, 1879-1887, the temperature was slightly lower, the absolute humidity was slightly less, the relative humidity was the same, the day and night ozone were considerably less.

Including reports by regular observers and others diphtheria was reported present in Michigan in the month of February, 1888, at 40 places, scarlet fever at 45 places, typhoid fever at 17 places, measles at 39 places, and small-pox at 1 place.

During February a disease variously named as a "common cold," and "epidemic influenza," has been very prevalent. It has affected to an unusual extent the root of the tongue. It has run through families, neighborhoods, and schools. Physicians have sometimes been called, especially when the cold threatened to "settle on the lungs."

AN ERGOT-MILL FOR OBSTETRIC BAGS.—Dr. Loviot, in describing Professor Pajot's obstetric bag in the *Annales de Gynecologie*, notes that it contains an ergot-mill. This instrument resembles a small coffee-mill, bearing, like that familiar domestic instrument, a handle, but in size it is not larger than a pepper-mill, and might work by the same simple mechanism. It may readily be packed in the bag, as it takes up very little room. The practitioner can only rely on freshly pulverized ergot of rye. This mill enables him to powder the ergot on the spot, so that in the hour of need a strong preparation of the drug may be made in the patient's chamber, even in the most remote country districts. In this manner perilous delays caused either by inert liquid preparations of ergot, or by waiting till some fresh tincture or fluid extract is brought to the lying-in room from some distant druggist's shop, are avoided, to the great advantage of the patient and the practitioner.—*British Medical Journal*, March 10, 1888.

SIR HENRY ACKLAND has recently had an eye removed for hæmorrhagic glaucoma. At last accounts he was doing well.

MR. T. B. CURLING, a well-known English surgeon, died at Cannes on March 4, of pulmonary congestion.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 10, 1888, TO MARCH 16, 1888.

Major G. M. Sternberg, Surgeon, ordered to proceed to Brunswick, Ga., on official business, and upon completion of same will return to his proper station. S. O. 57, A. G. O., March 10, 1888.

First Lieut. Jefferson R. Kean, Asst. Surgeon, relieved from duty at Ft. Sill, Ind. Ter., and ordered for duty at Ft. Robinson, Neb. S. O. 56, A. G. O., March 9, 1888.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING MARCH 17, 1888.

P. A. Surgeon W. H. Rush, detached from Navy Yard, New York, and to Naval Hospital, Philadelphia, Pa.

P. A. Surgeon J. M. Steele, detached from Naval Hospital, Philadelphia, and to Coast Survey Str. "Bache."

Medical Inspector A. S. Oberly, detached from Navy Yard, Portsmouth, N. H., and wait orders.

Surgeon F. L. Dubois, ordered to the Navy Yard, Portsmouth, N. H.

Asst. Surgeon, James Keeney, ordered to the receiving ship "Minnesota."

P. A. Surgeon C. W. Deane, detached from Marine Rendezvous, San Francisco, and to Coast Survey Str. "McArthur."

Asst. Surgeon E. W. Auzal, detached from Coast Survey Str. "McArthur," and to Marine Rendezvous, San Francisco.

P. A. Surgeon Clement Biddle, ordered to Naval Academy, Annapolis, Md.